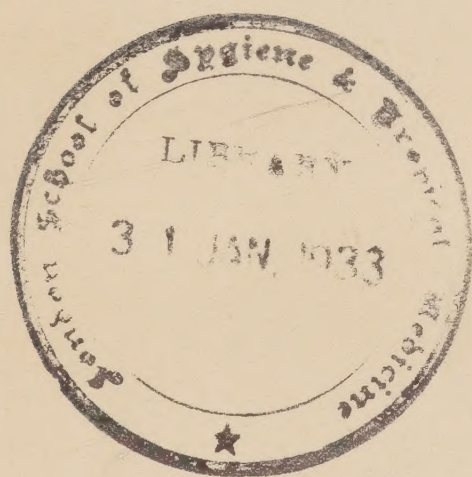



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JOURNAL

OF THE

STATISTICAL SOCIETY

OF

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QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

APRIL, 1841.

Comparison of the Sickness, Mortality, and prevailing Diseases among Seamen and Soldiers, as shewn by the Naval and Military Statistical Reports. By Major A. M. TULLOCH, F.S.S., &c.

[Read before the Statistical Society of London, 15th February, 1841.]

A VOLUME of Official Reports on the Health of the Navy having been recently presented to Parliament, an opportunity is thereby afforded of comparing the relative influence of the same climate on the health of seamen and soldiers,—of corroborating the deductions previously drawn from similar data in the Military Reports,—and of extending the range of our observation to various quarters of the globe, with the vital statistics of which we should otherwise have been unacquainted.

The volume referred to is divided into three parts :—the first embracing the health of seamen on the South American Station ; the second, of those on the West Indian and North American Station ; and the third, of those on the Mediterranean and Peninsula Station. To the first two of these, however, our proposed comparison cannot be extended, because there are no British troops in South America, and because, as the results relative to the naval force in the West Indies and North America refer generally to both climates, they cannot be brought into comparison with the sickness and mortality among the military in the West Indies on the one hand, or in North America on the other. In the Mediterranean, however, large bodies of troops are quartered at Gibraltar, Malta, and the Ionian Islands, while a considerable naval force is either stationed at, or is cruising in, the same vicinity, so that the Medical Returns of each service are likely to afford a fair estimate of the extent to which sailors and soldiers are respectively affected by the same climate ; and to this inquiry, accordingly, the following pages are principally devoted.

As the Naval Report, however, extends only over the seven years anterior to 1837, while the Military Report embraces the twenty years preceding that date, it is essential to an accurate comparison that the results should include the same period of time in each instance, because different epochs are often found to vary materially in salubrity. For this purpose the following statements regarding the military force will be found to refer only to the seven years from 1830 to 1837 ; and not to the whole period included in the Reports from which they have been taken.

On this principle, the subjoined table has been compiled, shewing the extent of sickness, mortality, and invaliding in the two services, during the period above referred to:—

YEARS.	NAVAL FORCE.				MILITARY FORCE.			
	Mean Strength.	Number Treated.	Total Deaths.	Number Invalided.	Mean Strength.	Number Treated.	Deaths from all Causes.	Number Invalided.
1830	6,576	9,305	66	190	10,652	11,593	224	97
1831	5,714	8,883	70	168	8,924	8,740	158	59
1832	6,634	7,659	81	181	8,825	8,833	136	62
1833	7,836	10,274	102	212	8,434	8,597	147	18
1834	8,745	11,393	97	214	8,516	11,475	285	88
1835	8,888	10,534	112	224	8,385	9,328	151	78
1836	11,316	14,623	89	244	8,564	9,213	169	190
Total	55,709	72,671	617	1,433	62,300	67,779	1,270	592
Annual Ratio per 1000 of Mean Strength . . .		1,304	11 $\frac{1}{10}$	25 $\frac{7}{10}$	..	1,088	20 $\frac{4}{10}$	9 $\frac{5}{10}$

On comparing the extent of sickness, as shewn by the number of admissions into hospital, in each of these tables, it appears that, of the naval force, 1,304 came under treatment out of every thousand annually, but of the military force only 1,088 out of an equal number were treated during the same period. Before drawing any conclusions, however, from these results, it is necessary to take into view a circumstance which tends to bring the extent of sickness more upon a par in the two services. Sailors are, from the nature of their duties on ship-board, much more subject to slight hurts and injuries, which, in bad weather, often tend very materially to increase the sick list; in order, therefore, to ascertain the relative extent of sickness arising in each service from the influence of climate alone, it is necessary to deduct from the returns of both the number reported under the head of wounds and injuries, thus:—

	NAVAL FORCE.		MILITARY FORCE.	
	Admissions to Hospital.	Deaths.	Admissions to Hospital.	Deaths.
Total, as in preceding Table	72,671	617	67,779	1,270
Deduct those arising from Wounds and Injuries . . }	12,415	101	6,685	152
Remain from Diseases . .	60,256	516	61,094	1,118
Annual Ratio per 1000 of Mean Strength . . }	1,082	9 $\frac{3}{10}$	981	18

This correction brings the relative extent of sickness more upon a par, but still a considerable excess is left in the naval force, among whom the ratio per 1000 of admissions into hospital remains 1,082, while in the military it is but 981. The reverse, however, is the case

as regards the mortality; the latter having lost annually by disease about 18, the former only $9\frac{3}{10}$ per 1000 of the strength.

This remarkable difference in the mortality may, in a great measure, be accounted for by the facilities in the navy for sending home, as invalids, all patients whose recovery would be doubtful or protracted, if they continued to serve abroad. The extent to which this is likely to have influenced the results, may be estimated from the circumstance that 25 per 1000 of the naval force have thus been sent home annually, while of the military not more than $9\frac{1}{2}$ per 1000 have enjoyed the same advantage; consequently the former service gets rid of the greater proportion of its chronic cases, which in the latter continue in hospital till they terminate fatally.

There is also an important difference in the mode of invaliding in the two services, which is likely to have had a material influence on the mortality. In the navy a sailor can obtain a passage to his native country, on board of some homeward-bound man-of-war, so soon as the medical officer thinks his health likely to be improved by it; but in the army, the opportunity of sending home soldiers labouring under chronic disease, has hitherto occurred only once or twice a year, so that however urgent might be the necessity for such a change, they have frequently been obliged to wait several months for a conveyance, in the course of which many perish, whose lives would in all probability have been saved, had the means of transport to their native country been afforded at an earlier period. A better arrangement has now been made, by which soldiers can be sent home so soon as the medical officers deem that change requisite; but this had no effect at the period to which the present statement refers.

The comparatively short duration of the sailor's service has also a powerful influence in keeping the mortality below that which prevails among troops in the same climate. Soldiers are enlisted for life, and in most instances continue to serve from 21 to 25 years consecutively; while sailors only engage for the period during which a vessel is to continue in commission, and which seldom exceeds three or four years. They are then paid off; their engagement is at an end; and they cannot return to the service without undergoing another medical inspection, at which all who are either labouring under disease, or are likely to prove unhealthy, are rejected. This must have relatively the same effect as if it were the practice in the army, every third or fourth year, to discharge all soldiers whose constitutions were in the slightest degree deteriorated; a precaution which there can be no doubt would have a very material influence in reducing the amount of mortality. The experience of Insurance Companies shews the advantage of recent examination to be so important in this respect, that several newly-established offices, although consisting of 200 or 300 members, have sustained no loss for a year or two—a circumstance which never occurs with those longer in operation, even though the number insured be the same.

To all who are conversant with the subject of Vital Statistics, it is well known that age forms a most important element in any comparison of the mortality between two bodies of men. On this point, the Naval Returns do not supply any information, owing to the difficulty, among so migratory a race as seamen, of obtaining the necessary details with

sufficient accuracy ; but it seems by no means probable, that among men who only engage for a limited period, the numbers at an advanced age can be as great as in the army, where the engagement is for life. In the navy, moreover, a large proportion of the establishment consists of boys about the age of puberty, at which period they are less subject to mortality than at any other.

To these circumstances, tending to lower the mortality on ship-board, may be added the sanatory influence of the sea-air on those chronic affections of the liver and bowels, from which persons are apt to suffer in warm climates, and which will be adverted to more particularly in the following comparison of the various diseases to which the naval and military forces stationed in this Command have respectively been subject during the period under review.

Owing, however, to a difference in the classification of the diseases in the Naval and Military Reports, it becomes necessary, previous to any such comparison, to apply the same nosological arrangement to each ; and being best acquainted with the military forms, we shall perhaps be excused for reducing the diseases of the seamen to that standard, in the following table :—

DISEASES.	NAVAL FORCE.		MILITARY FORCE.		Ratio per 1000 of Mean Strength.			
	Out of an Aggregate Force of 55,709.		Out of an Aggregate Force of 62,300.		Attacked.		Died.	
	Attacked.	Died.	Attacked.	Died.	Naval Force.	Military Force.	Naval Force.	Military Force.
Fevers	4,677	84	13,173	231	84	211	1·5	3·7
Eruptive Fevers . . .	401	8	58	3	7	1	·14	·05
Diseases of the Lungs.	13,514	177	8,955	405	243	144	3·2	6·5
" Liver	547	16	972	35	10	16	·3	·6
" Stomach } and Bowels }	8,649	52	11,737	157	155	188	·9	2·5
Epidemic Cholera. . .	96	22	459	131	2	7	·4	2·1
Diseases of the Brain .	958	52	656	67	17	11	·9	1·1
Dropsies	73	9	112	24	1	2	·2	·4
Rheumatism	3,560	8	2,740	4	64	44	·14	·07
Syphilis.	2,771	..	1,522	4	50	24	..	·07
Gonorrhœa.	1,451	..	2,254	..	26	36	..	..
Ulcers	3,969	6	3,508	..	71	57	·1	..
Erysipelas	531	15	137	4	10	2	·3	·07
All other Diseases . .	19,059	67	14,811	53	342	238	1·2	·9
Total	60,256	516	61,094	1,118	1,082	981	9·3	18·06

This table shews at a glance the principal classes of diseases to which the military and naval forces serving in the Mediterranean have been respectively subject ; but as most of these classes are composed of several varieties, a brief analysis of the diseases comprehended under them may be necessary, coupled with a few observations as to the probable causes which have tended to increase or diminish their relative prevalence in the two services.

FEVERS.

Under this head, in the preceding table, are comprised,—

	NAVAL FORCE.		MILITARY FORCE.	
	Out of an Aggregate Strength of 55,709.		Out of an Aggregate Strength of 62,300.	
	Attacked.	Died.	Attacked.	Died.
Intermittent	337	6	2,558	5
Remittent	553	10	2,486	144
Common Continued	3,787	68	8,103	72
Typhus, &c. . . . .	..	..	26	10
Total	4,677	84	13,173	231
Annual Ratio per 1000 of Mean Strength . }	84	1·5	211	3·7

This class of diseases is about twice as prevalent and fatal among the military as the naval force; a circumstance which will not excite surprise, when it is kept in view that fevers depend so very materially on locality; and that while the troops are at all times constrained to remain in a spot which may be the very focus of disease, a vessel can choose her position, and either lie at a distance from the shore, or, if that precaution proves unavailing, can put to sea and speedily place her crew beyond the reach of danger.

There is also another circumstance which tends to invalidate this comparison. Nearly two-fifths of the land force in the Mediterranean are stationed in the Ionian Islands, where almost all the cases of intermittent and remittent fevers among the troops have occurred; while only a small proportion of the navy is ever employed in that quarter. Had the comparison been made with the troops serving in Gibraltar and Malta, where the greater part of the fleet is stationed, the proportion of febrile attacks in the military and naval forces would have been respectively as 133 to 84, and the proportion of deaths as 2·1 to 1·5.

The remarkable coincidence in the proportion of deaths to attacks in the two services, shews that there can be little difference in the efficacy of the mode of treatment employed; for among the sailors 1 case in 56 proved fatal, and among the soldiers 1 in 57, the result being to within a fraction the same in both cases.

ERUPTIVE FEVERS.

That this class of diseases should be much more common in the naval than in the military force will not excite surprise, when it is considered that a large proportion of the former consists of boys, at that period of life when they are liable to many of the eruptive diseases of childhood. Besides, from the close contact into which individuals are necessarily brought on ship-board, a contagious disease once introduced must be much more likely to extend itself there than on shore.

The difference in the two services is shewn in the following table:—

	NAVAL FORCE.		MILITARY FORCE.	
	Out of an Aggregate Strength of 55,709.		Out of an Aggregate Strength of 62,300.	
	Attacked.	Died.	Attacked.	Died.
Small Pox	111	6	12	2
Cow Pox	203	..	3	..
Chicken Pox	7	..	1	..
Measles	65	1	23	..
Scarlet Fever	15	1	19	1
Total	401	8	58	3
Annual Ratio per 1000 of Mean Strength . . }	7.	·14	·9	·05

The remarkable difference in the number of cases of cow-pox in the naval compared with the military force, arises from the circumstance that all soldiers on whom distinct marks of vaccination do not appear, have to undergo that operation immediately on enlistment; while in the navy it seems to be the practice not to perform it on the unprotected cases till the vessel has put to sea, consequently among the former nearly all the cases of vaccination will appear in the Depôt Returns, and not in those of the service companies abroad.

The cases of small-pox occurred principally in four vessels lying in the Tagus and at Malta, where the disease was then prevailing on shore. They seem, however, to have been of a milder character than is usually observed, as only 1 case in 18 proved fatal.

DISEASES OF THE LUNGS.

Under this head, in the preceding table, are comprised—

	NAVAL FORCE.		MILITARY FORCE.	
	Out of an Aggregate Strength of 55,709.		Out of an Aggregate Strength of 62,300.	
	Attacked.	Died.	Attacked.	Died.
Inflammation of Lungs } and Pleurisy }	1,742	54	1,667	71
Spitting of Blood . . .	147	3	171	7
Consumption	285	105	417	272
Catarrhs	11,237	12	6,586	52
Asthma and difficulty of Breathing }	103	3	112	3
Total	13,514	177	8,953	405
Annual Ratio per 1000 of Mean Strength . . }	243	3·2	144	6·5

The attacks by this class of diseases have been nearly twice as numerous among the naval as among the military force employed in the Mediterranean, but the mortality has been only half as great.

On investigating, however, the different forms of disease comprehended under this head, it will be found that inflammation of the lungs, pleurisy, spitting of blood, asthma, and difficulty of breathing, prevail to almost precisely the same extent in both services; and that the difference consists principally in catarrhal affections and consumption. Of the former, nearly double the proportion have come under treatment in the naval force, but not a fourth part so many cases have terminated fatally, owing, it is believed, to the greater facility for invaliding those in whom this disease assumes a chronic or serious form. To the same circumstance is probably to be attributed the smaller proportion of consumptive cases in the navy, in which only $5\frac{1}{10}$ per 1000 have come under treatment annually, while among the military the proportion was $6\frac{7}{10}$ per 1000. Even the former ratio, however, is sufficient to shew, that the climate of the Mediterranean is far from exerting any decided influence in retarding the development of consumption, when persons are constitutionally predisposed to it, since the proportion attacked of the naval force there is quite as large as among the civil population at home.

It will perhaps be deemed a remarkable feature of the preceding table, that only about one-third of the consumptive cases among the sailors appear to have terminated fatally; but so many were sent home and lost sight of after their arrival, that the deaths inserted in the Returns can by no means be assumed as a correct measure of the ultimate consequences of this disease. The author of the Naval Report very justly observes, that "if all were genuine cases of phthisis, the mortality must unquestionably have been much greater than what is stated in the returns."

There seems, however, little doubt that either the sea air or the excitement produced by the voyage, do sometimes operate very materially in alleviating the symptoms of this disease. Many soldiers sent home from Malta, with the apparent symptoms of confirmed phthisis, have arrived in this country in renovated health, and speedily returned to their duty; and so marked has been the improvement in several instances, that within the last year increased facilities have, at the special request of the medical officers, been afforded for sending home invalids of this class. Thus while the faculty in this country are sending their consumptive patients to Malta, the medical officers in that island are sending soldiers labouring under the same disease to England; and as benefit is supposed to be derived from the change in both cases, it seems much more likely to arise from the influence of the voyage than mere change of residence, especially as the proportion of deaths among those labouring under consumption is remarkably low on ship-board.

The large number attacked by catarrhal affections in the naval compared with the military force, will no doubt excite attention. This most probably arises from the circumstance, that in order to carry on the duties of the ship when at sea, one-half of the crew must always be on deck, and continue there for four hours at a time; so that either at one, or at four, o'clock in the morning, they have to leave their beds, and

rush from an over-heated atmosphere into the open air, where they remain during their watch, exposed to all the vicissitudes of the weather. In the army, however, the soldier is only on guard every third or fourth night, and remains exposed to the weather but for two hours at a time, during which he is generally well secured against its inclemency by his great-coat and other equipments.

Even when vessels are in harbour, and a very small proportion of the sailors are required on deck during the night, another exciting cause of this disease comes into operation ; for the space between decks being then occupied by a dense mass of bodies, nearly in contact with each other, the atmosphere is so deteriorated, that every means of ventilation is gladly resorted to ; those who sleep in the vicinity of the ports and windsails, have thus a stream of cold air rushing constantly upon them, than which nothing is more likely to excite catarrhal affections, while others, at a distance from these sources of ventilation, are so oppressed with heat, as to become careless of exposure, provided they obtain even temporary relief. Soldiers, too, are no doubt occasionally crowded in barracks, but never of late years to the same extent as seamen. Indeed when we consider that several hundred men have frequently to be accommodated in the limited space between the decks of a line-of-battle ship, it is only surprising that the evil consequences of such close confinement are not manifested to a greater extent than is apparent from these Returns.

DISEASES OF THE LIVER.

Under this class, in the preceding table, are comprised,—

	NAVAL FORCE.		MILITARY FORCE.	
	Out of an Aggregate Strength of 55,709.		Out of an Aggregate Strength of 62,300.	
	Attacked.	Died.	Attacked.	Died.
Inflammation of the Liver	403	12	722	29
Jaundice	144	4	250	6
Total	547	16	972	35
Annual Ratio per 1000 of Mean Strength . }	10	·3	16	·6

Diseases of this class are by no means common on ship-board, only 10 out of every 1000 having been attacked by them annually, while among the military force the proportion has been 16 per 1000 ; the mortality, too, among the latter is nearly double that of the former. The difference may readily be accounted for, by the superior facility existing in the navy for sending home chronic cases, and by the circumstance, that even a short cruize at sea is known to have so beneficial an influence in checking the progress of these diseases, as to be generally resorted to on foreign stations, when circumstances do not admit of the patient returning to his native country.

DISEASES OF THE STOMACH AND BOWELS.

Under this head, in the preceding table, are comprised—

	NAVAL FORCE.		MILITARY FORCE.	
	Out of an Aggregate Strength of 55,709.		Out of an Aggregate Strength of 62,300.	
	Attacked.	Died.	Attacked.	Died.
Inflammation of Stomach, } Bowels, & Peritoneum }	142	13	105	21
Dysentery.	742	18	2,308	108
Indigestion	1,004	2	441	4
Vomiting of Blood . . .	18	1	25	3
Diarrhœa	4,351	8	5,682	15
Cholera Morbus	306	4	1,056	4
Colic	966	4	1,493	2
Constipation	1,120	2	627	..
Total	8,649	52	11,737	157
Annual Ratio per 1000 } of Mean Strength . }	155	·9	188	2·5

This class of diseases is not only less prevalent in the naval than in the military force, in the proportion of 155 to 188, but the mortality is little more than a third part as high. This is owing principally to the rarity of dysentery, of which only 742 cases and 18 deaths occurred among the former, while 2,308 cases and 108 deaths took place among the latter during the period. This disease is by no means common on ship-board, even in other Commands where it is the principal source of sickness and mortality among the troops. For instance, among the squadron serving on the West Indian and North American Station, only 12 per 1000 were attacked, and 3 in 10,000 died annually from it, while among the military force serving in the West Indies, 163 per 1000 were attacked and 7 per 1000 died annually. The healthful breezes of the ocean seem to exert a most beneficial influence on this disease, for it has often been remarked that if a patient can only be embarked at an early stage, his recovery is almost certain.

Dysentery being exceedingly apt to recur in any individual who has once suffered from it, there can be no doubt that the mortality in the navy is also considerably reduced by the frequent opportunities of sending home those in whom it has begun to assume a chronic form ; whereas soldiers, for whom that remedy has been prescribed, may sometimes be left without the means of transport for the greater part of the year, during which many deaths must occur. The hopeless nature of this disease in an advanced stage, unless a speedy change of climate can be obtained, may be inferred from the circumstance, that in every colony where it prevails, about 1 in 4 of all the chronic cases which come under treatment proves fatal.

Sailors are also, in a slight degree, less subject to diarrhœa than soldiers, the proportion attacked by that disease being about one-fifth less. They are only half as subject to colic and cholera, but suffer twice as

much from dyspepsia and constipation; inflammation of the stomach, bowels, and peritoneum are also more frequent.

As this is a class of diseases which is likely in some measure to be influenced by diet, it may be proper here to contrast the relative situation of the soldier and sailor in this respect.

The cruizes in the Mediterranean being generally very short, the greater portion of the sailor's time is spent in harbour or along shore, where he is amply supplied with fresh meat and vegetables, because they are cheaper and more healthy than salt rations. Hence the occasional change to the latter description of diet is nothing more than an agreeable variety, which is never continued so long as to prove injurious to the constitution; and all that frightful train of scorbutic and dysenteric affections, under which our fleet suffered so severely in former days, is now entirely unknown.

The rations of the sailor are not only more varied, but are also much more plentiful than those of the soldier, as will be seen by the following contrast:—

Sailor's daily ration.

1½ lb. of bread, or
1 lb. of biscuit;
1 lb. of fresh meat, and
½ lb. of vegetables; or
¼ lb. of salt beef, and
¼ lb. of flour; or
¼ lb. of salt pork, and
½ pint of peas; also
1 gallon of beer, or
1 pint of wine, or
¼ pint of spirits;
Tea ¼ oz;
Sugar 1½ oz;
Cocoa 1 oz; also *weekly*,
½ pint of oatmeal, and
½ pint of vinegar.

*Soldier's daily ration, in non-tropical
Climates.*

1 lb. of bread, or
¾ lb. of biscuit;
1 lb. of fresh or salt beef or pork.

In Tropical Colonies.

The same as above, except that on two days of the week the issue of salt pork is reduced to 12 oz., and the soldier receives in lieu of the remainder a daily issue of

⅝ oz. of cocoa;
1½ oz. of sugar;
¼ lb. of rice, or
½ pint of peas.

In the navy 1 lb. of raisins, or ½ lb. of currants, or ½ lb. of suet, may be received in lieu of a lb. of flour; thus affording to the sailor the means, on salt-meat days, of procuring about ½ lb. of good pudding in lieu of his flour. Butter may in like manner be obtained for sugar, cheese for cocoa, &c., varieties which the soldier on his limited means can seldom procure, even if the markets on shore are well supplied.

While the ration of the sailor thus affords the materials for three excellent meals daily, without trenching on his pay, that of the soldier, even though he purchases vegetables, tea, and coffee, in addition thereto, will only furnish him with two meals, and those of rather a scanty description. He generally breakfasts at eight o'clock, and dines at one, consequently 19 hours are passed without any regular meal; for unfortunately the small surplus of his pay, not exceeding 2*d.* per day, is more generally spent on liquor than on food. Not only is the ration of the seaman more plentiful, but he has double the pay of the soldier, from which he can readily afford to purchase any additional comforts required. An able-bodied seaman receives, in addition to his rations, 1*l.* 14*s.* for a month of 28 days, a soldier only 16*s.* 4*d.* for the same period; the latter is also subject to numerous small stoppages for keeping

up his appointments and accoutrements, which do not affect the former. The sailor is not settled with daily or weekly, like the soldier, but most of his pay is allowed to accumulate for him till the ship is paid off; a sufficient portion being however advanced on foreign stations, to supply all his necessary wants, and to provide any additional comforts required at sea.

Whether these advantages on the part of the sailor may have any tendency to reduce the frequency and severity of this class of diseases in the naval force, we cannot presume to decide; but we have pointed out the distinction in this respect between the two services, that others may give to it that weight which they conceive it to deserve.

EPIDEMIC CHOLERA.

The extent of sickness and mortality by this disease in the two forces, is shewn in the following table:—

NAVAL FORCE.		MILITARY FORCE.	
Out of an Aggregate Strength of 55,709.		Out of an Aggregate Strength of 62,300.	
Attacked.	Died.	Attacked.	Died.
96	22	459	131

Although this epidemic prevailed to so great an extent among the troops at Gibraltar in 1834, and was common also throughout the Peninsula in that and the preceding year, it will be observed that the navy suffered comparatively little. The facility of removing vessels from the quarter where the disease originated, so soon as cases began to appear, no doubt contributed greatly to this exemption, as all the attacks occurred in harbour, or in the immediate vicinity of the shore; and the prevalence of the disease was checked on putting to sea.

From the above statement of the number of attacks and deaths by cholera in the naval and military force respectively, the proportion of recoveries appears to have been greatest among the former, in the proportion of 1 in $4\frac{1}{2}$ to 1 in $3\frac{1}{2}$; but it seems rather doubtful whether 33 of the cases which occurred on board the *Castor*, when lying off Santander, were of genuine Asiatic cholera, as only 3 terminated fatally, and the symptoms were comparatively mild. Deducting these, the proportion of deaths to recoveries would be precisely the same in both services, *viz.*, 1 in $3\frac{1}{2}$.

DISEASES OF THE BRAIN.

Under this head, in the preceding table, are comprised,—

	NAVAL FORCE.		MILITARY FORCE.	
	Out of an Aggregate Strength of 55,709.		Out of an Aggregate Strength of 62,300.	
	Attacked.	Died.	Attacked.	Died.
Inflammation of the Brain	20	4	9	3
Apoplexy	51	37	44	17
Paralysis	35	1	62	6
Water in the Head . .	1	1	1	1
Headache and Vertigo .	516	2	56	1
Epilepsy	201	1	176	2
Fatuity	32	..	42	3
Madness	24	..	70	4
Stroke of the Sun . .	14	..	..	..
Brain Fever of Drunkards	64	6	196	30
Total	958	52	656	67
Annual Ratio per 1000 of Mean Strength. }	17	·9	11	1·1

Although the proportion of attacks by this class is highest among the naval force, yet when the diseases are analyzed, the difference will be found principally to arise from 516 cases recorded as headache and vertigo, whereas there are only 56 cases of a synonymous character recorded in the Army Returns. Inflammation of the brain appears a more common disease on ship-board. Cases of apoplexy are also considerably more numerous, and at least twice as fatal, as among troops on shore; but to what circumstance that peculiarity is likely to have been attributable, does not appear. Perhaps the confinement of ship-board induces a congestion of the venous system, favourable to the development of that disease. Delirium tremens, and madness, both in general the result of intoxication, are only about one-third as common among sailors as soldiers, probably because that vice, though sometimes carried to a great extent by the former, can seldom become habitual; for when a vessel puts to sea, all opportunity of obtaining liquor beyond the regulated allowance is at an end, and even in harbour, it is only when the sailor has liberty to go on shore that he can indulge in such excess as to injure his constitution. With the soldier, however, the case is different, there are canteens in his barrack, and grog-shops out of it, which keep the temptation to intemperance constantly before his eyes; and unfortunately, in nearly all foreign stations, the price of spirits is so extremely low, that for 3*d.* or 4*d.* he is able to procure sufficient to produce intoxication.

In connexion with this subject, it may be stated that throughout the whole naval force in the Mediterranean, only 2 cases of suicide can be traced, while in the military force, during the same period, there have been at least 20, exclusive of many persons found drowned, without any indication whether their deaths had been voluntary or accidental. Sailors are generally of a more lively, cheerful disposition than soldiers, and constant change of scene contributes to keep them so. If a station is disagreeable, they know that their residence is not likely to be long,

whereas the soldier may be for years confined to the dull routine of garrison duty there, without the hope of a change. In the army, too, the means of self-destruction, by fire-arms, is ever at hand ; and many soldiers thus terminate existence in a fit of intoxication, who never contemplated such an end in their sober moments.

DROPSIES.

Under this head, in the preceding table, are comprised,—

	NAVAL FORCE.		MILITARY FORCE.	
	Out of an Aggregate Strength of 55,709.		Out of an Aggregate Strength of 62,300.	
	Attacked.	Died.	Attacked.	Died.
Subcutaneous Dropsy .	47	1	60	13
Abdominal ,, .	18	4	46	5
Water on the Chest .	8	4	6	6
Total . . .	73	9	112	24
Annual Ratio per 1000 of Mean Strength . }	1	·2	2	·4

The influence of this class of diseases is much more limited among sailors than soldiers in the Mediterranean, because endemic fevers, by which they are frequently induced, are less common on ship-board, and because, if a tendency to dropsy was observed, the patient would be immediately sent home. In this comparison, too, it must be kept in view, that more than half the dropsical affections among the troops occurred in the Ionian Islands, where, as already stated, a small proportion only of the navy is stationed.

There now only remains for notice the relative prevalence of a few diseases, which are the source of very considerable inefficiency, both among sailors and soldiers, although they do not admit of being classed under any of the previous heads.

	NAVAL FORCE.		MILITARY FORCE.	
	Out of an Aggregate Strength of 55,709.		Out of an Aggregate Strength of 62,300.	
	Attacked.	Died.	Attacked.	Died.
Rheumatism	3,560	8	2,740	4
Syphilis	2,771	..	1,522	4
Gonorrhœa	1,451	..	2,254	..
Ulcers	3,969	6	3,508	..
Erysipelas	531	15	137	4

From this comparison, rheumatism appears much more common in the naval than in the military force stationed in the Mediterranean,

probably owing to the same cause to which we before attributed the prevalence of catarrhal affections, *viz.*, the sudden and frequent exposure to the night air, occasioned by the nature of the sailor's duties. Although venereal affections are on the whole nearly equally common in both services, there is a considerable difference in the types under which they manifest themselves, syphilis being most prevalent among seamen, and gonorrhœa among soldiers; which probably arises from few sailors being employed in the Ionian Islands, where the latter disease is much more general than the former. Ulcers are also rather more common on ship-board, but the difference is very trifling.

Erysipelas requires to be specially noticed in the above comparison, because it is so peculiarly prevalent and fatal on ship-board, the attacks and deaths having been at least four times as numerous as among the troops on shore. Sometimes the slightest scratch or contusion will call this erysipelatous tendency into action, and at other times it originates in a small swelling, independently of any external injury. It is generally confined to particular ships, while others, though lying in the immediate vicinity, and apparently exposed to the same exciting causes, are entirely exempt. It breaks out at sea quite as often as in harbour, and sometimes with extreme severity. Of 8 cases, for instance, which occurred on board one vessel, without the parties having previously suffered from any external injury, 3 proved fatal. This disease was much more common in former days than at present, but the causes in which it originates are still involved in doubt and obscurity.

The cases not included under either of the preceding heads, but which have been classed together under the general term of "all other diseases," though amounting to 19,059 in the naval, and to 14,811 in the military force, refer for the most part only to very slight and unimportant diseases, which it is unnecessary here to enumerate. The deaths classed under the same general head amount only to 67 in the naval, and to 53 in the military force, and arise in both services principally from aneurism, diseased heart, scrofula, tumours, and abscesses; but it is particularly worthy of remark, that there is no death, and only a few slight cases, in either service from scurvy, a disease which at one period committed such frightful havoc in our fleets and armies, but which has disappeared under the improved diet and sanatory regulations of modern times.

With these remarks we must conclude our comparison of the relative influence of the climate of the Mediterranean on the health of the naval and military force employed there. Many other topics of interest might readily be derived from the same source, but time only admits of our adverting to the most prominent, and we leave the mine as yet unexhausted, to those who may be inclined to pursue a similar course of investigation.

Although there are at present no means of extending this comparison between the health of seamen and soldiers, to the other colonies referred to in the Naval Report, it may prove interesting to state, that on the average of the 7 years before referred to, 1,486 cases of sickness, and nearly 20 deaths, occurred among every 1000 seamen serving in the West Indies and North America; but as that Command reaches from the vicinity of the equator to Baffin's Bay, and includes latitudes notorious for their insalubrity with others as decidedly the reverse,

it is manifestly impossible to venture more than a conjecture as to whether that should be termed a high or low standard of health for such climates, unless we knew what proportion of the force was serving in North America, the Bermudas, and West Indies respectively. This important element is not supplied in the Naval Returns, nor is it likely ever to be attainable, owing to the frequent and rapid movements of vessels from one part of the Command to another. The most important of the diseases, however, are decidedly of a tropical character; for out of a total of 427 deaths, no less than 264 have been caused by fevers; so that supposing even the whole of the other diseases to have been incurred within the northern range of the Command, the mortality there would not have exceeded 1 per cent. annually.

With regard to the South American Command, more accurate conclusions can be attained, for there all parts are alike healthy, whether situated in the torrid regions of the southern tropic, or on the ice-bound shores of Cape Horn. Indeed the facts in this Report offer a remarkable exception to all those theories which have heretofore attributed the origin of remittent or yellow fever to elevated temperature, excessive moisture, marshy exhalations, or decayed vegetation; for this Command stretches from the 58th degree of south latitude to the equator on the east coast, and beyond the equator to the 30th degree of north latitude along the shores of the Pacific. Of 10 harbours frequented by our vessels, 7 lie within the tropics, and the temperature is considerably higher than at Vera Cruz, Havannah, or Jamaica, where yellow fever abounds; yet among an average force of 2,465 men, only 23 deaths occurred by fever of all kinds, in the course of 7 years, being $1\frac{3}{10}$ per 1000 annually—a smaller proportion than either in the Mediterranean, or among the most select class of the civil population at home. It presents a striking contradiction to the supposition of remittent or yellow fever being induced by excessive moisture, or by heat and moisture combined, that in no part of the world does more rain fall than on the coast of Brazil, and yet that disease is just as rare as on the coast of Peru, where the supply of moisture is always remarkably scanty, and years sometimes pass without any rain at all. As for vegetation, the whole of the equatorial regions of this immense continent may be termed one dense forest, and the soil to the depth of several feet is nothing but a mass of decayed foliage, accumulated during many centuries, which is kept in a marshy state by the frequent overflowing of the numerous streams which drain the interior. No position certainly could appear more favourable to the development of febrile disease, yet it is almost unknown. Well may the author of the Naval Report exclaim, “Why is it that in a land-locked harbour, in this part of the world, under a powerful sun, surrounded by marshes and rank vegetation, ships lie for months or years, without the occurrence of a single case of concentrated fever, while in other places, in Africa, in Asia, in North America, and more especially in the West Indian Islands, things which to superficial observation appear to be the same, are productive of so much disease and death?”

If our vessels were constantly cruising about, their exemption might perhaps be ascribed to that circumstance, but the protection of our trade in an unsettled country requires that the greater part of the force

should be stationary, and in some instances, vessels remain for years in one harbour, and in constant intercourse with the shore; yet those employed on that duty have never experienced the slightest inconvenience from it, and the low rate of mortality, not only as regards fever, but all other diseases, is perhaps unparalleled in the annals of Medical Statistics. The average force serving in this Command has been 2,465, forming an aggregate strength for 7 years of 17,254, among whom only 134 deaths occurred by disease in that period, being but $7\frac{7}{10}$ per 1000 of the force annually; a lower ratio than has ever been known among the most select class of the population at home. It is true, that owing to the facility of invaliding before referred to, several may have died of disease contracted on the coast, without the circumstance being apparent from the returns; but even compared with the Mediterranean squadron, in which the same cause may be supposed to have operated to an equal extent in reducing the mortality, this force must have been remarkably healthy, for—

	The Annual Ratio Attacked by Disease, was	The Annual Ratio of Deaths from Disease, was	The Annual Ratio of Invaliding, was
In the Mediterranean Squadron	1,082	$9\frac{3}{10}$	$25\frac{7}{10}$
,, South American ,,	1,072	$7\frac{7}{10}$	28

The salubrious character of the climate of South America manifests itself, not only in the comparative rarity of fevers, but of all other diseases. Unfortunately time will not admit of our going into the details on this subject, with the same minuteness as for the Mediterranean; but enough has been stated to shew how completely the character of this portion of the American continent is at variance with all established theories, and that there is much to learn, and much to unlearn, before any decided opinion can be offered as to the specific agencies to which the absence or presence of particular diseases is attributable. It would appear, too, that the adaptation of the constitution to foreign climates is not circumscribed within such narrow limits as has generally been supposed, and that the inhabitants, even of these northern isles, may range through a considerable portion of the tropics, without encountering those fatal diseases which elsewhere, in similar latitudes, have proved so destructive to them.

The evidence adduced in these Reports also warrants the pleasing conviction, that the profession to which Britain owes so much of her greatness and prosperity, is decidedly healthy, and that her flag is borne to the remotest quarters of the globe at the least possible expenditure of human life. The liberality of her Government in providing for all the wants and comforts of seamen, whether in health, in sickness, or in old age, will ever be the surest pledge that she will retain the naval supremacy she has acquired, and that there will be no scarcity of defenders to rally round her standard in the hour of danger.

Report upon the Mortality of Lunatics. By WILLIAM FARR, Esq.,
F.S.S.

[*Read before the Statistical Society of London, 15th March, 1841.*]

THIS Report, which has been drawn up at the request of the Council of the Society, is founded on the Reports of the Hanwell Asylum, Returns from the Bethlem Hospital, and the valuable series of tables submitted to the Society last year by Colonel Sykes. It was thought desirable that the mortality of lunatics in two of the largest public institutions of the country, should be compared with the mortality in the licensed proprietary houses; and that, if the mortality differed, the differences should be investigated, and traced to their causes, by the methods of statistical analysis which we now possess.

The condition of lunatics in this country has, within the present century, attracted much public attention; and in 1807, 1815, 1816, and 1827, the management of the asylums provided for their confinement was investigated by Committees of the House of Commons. Many abuses were brought to light; and the last committee, of which Mr. Gordon was chairman, stated in their report, after a searching and able inquiry, that the abuses discovered in 1815 still existed. They “repeated, adopted, and confirmed” the recommendations of the committees of 1807 and 1815. Enactments subsequently passed the legislature; and several county asylums (among which that of Middlesex deserves to be particularly mentioned,) have since been erected. No parliamentary inquiry has been instituted since 1827; but Mr. Ewart has given notice of his intention to move in the House of Commons for the appointment of a committee in the present session of Parliament.

The persons of unsound mind in England amount to several thousands. They are usually of middle age, frequently parents, and are of all conditions and ranks of life: 494 lunatics confined under the Crown possess property yielding an annual income of 317,154!.* Men of the highest intellectual rank—men of genius—are not exempted from the visitations of this disease; it stoops to the lowest, and disorders the meanest brain. It makes the labourer a pauper, and too often ruins the families of the middle classes. 6,402 idiots, and 7,265 lunatics, have been returned to Parliament as paupers. Such a disease, which disorders the senses, perverts the reason, and breaks up the passions in wild confusion;—which assails man in his essential nature,—brings down so much misery on the head of its victims, and is productive of so much social evil—deserves investigation on its own merits, by statistical as well as other methods. But it has an additional claim upon the attention of the society. A considerable portion of the insane are under confinement, and have to be provided for or watched over by the State; which, as it permits them to be deprived of liberty, is bound to afford them protection, and to assure them the best means of restoration to health.

Great improvements have taken place in the treatment of lunatics. In the best asylums they are no longer shut up in cells like wild beasts, nor punished by harsh keepers. Their chains have gradually been struck off. A further step has been attempted. At the Middlesex

* See Parliamentary Return, Session 1839, No. 378.

Asylum no strait-waistcoats, straps, or other instruments of personal coercion have been used since the 21st of September, 1839. The experiment was first tried at Lincoln, and it is now contended by persons of experience, ability, and integrity—by Mr. Hill, Dr. Conolly, and the visiting justices of Middlesex,—that in a house properly built, with skilful medical supervision, and a sufficient number of humane and intelligent keepers, personal coercion should be abolished. This is denied by other gentlemen of equal humanity, who maintain that although all restraint *may* be dispensed with, the strait-waistcoat should still be employed as a remedy in the paroxysms of mania. A keen controversy has been waged on the subject. Asylums not only differ widely in the extent to which restraint is carried, but in the space allotted to patients, in their employment, food, and medical treatment. The cost of criminal lunatics at Bethlem is 15s. a-week; of idiots or lunatics in the work-houses, 2s. 10d. to 3s. 6d. a-week. Some of the asylums are under the control of the visiting justices, others are visited by the Metropolitan Commissioners; the hospitals of Bethlem and St. Luke are not visited at all, but are managed by the officers and governors; while a very large number of lunatics are farmed out, or confined in workhouses, by the parish authorities.

Amidst these various circumstances, and conflicting systems, we ask which is the most advantageous? and it will be replied by all parties, “that is the best system under which the greatest number of lunatics recover their reason in the shortest time.” But in a slow disease, presenting so much diversity in individuals, it is evident that the superiority of any system of treatment can only be determined by the average results, by a comparison of the recoveries and deaths, in fine, by statistics; and the Statistical Society, as a body quite disinterested, is probably better qualified than any other society to collect information upon the subject, and to submit the results to the public, to the parties concerned, and to all those humane persons who devote attention to a class of our fellow-creatures suffering under one of the saddest calamities which can befall our nature.

The number of lunatics and dangerous idiots under confinement in Middlesex, and in the parts of Surrey and Kent within the jurisdiction of the Metropolitan Commission, is about 3,110, and the following was their distribution in 1839:—

	Males.	Females.	Total.
In the Asylum at Hanwell . .	346	488	834
Bethlem Hospital	148	151	299*
St. Luke's „	104	136	240
Guy's „ . . . .	..	24	24
34 Licensed Houses . . .	787	926	1,713
Total . . .	1,385	1,725	3,110

459 men, and 419 women in the licensed houses are not paupers; and many persons insane in different degrees remain at home under the

* Exclusive of 16 out on leave.

care of their friends. The London workhouses contain a considerable number of idiots and lunatics. Exclusive of these 3,110 persons, others are confined as lunatics in the public institutions of the metropolis. When it is considered that insanity is a long disease, which not only disables the patient, but often renders him difficult to control, and dangerous to himself and to society, the fact that 7 in 10 of the 3,100 lunatics fall upon the public for support and treatment, will not be deemed surprising.

The Hanwell Asylum was opened on May 16th, 1831, and the number of lunatics admitted in the 9½ years, ending September 30th, 1840, as shewn in the following Table, was 2,029; the number discharged was 1,171; of whom 449 had recovered, 66 had been relieved, and 656 had died: 858 remained in the asylum.* More than *half* the patients die in Hanwell, and more than *one-third* are cured:—

	Men.	Women.	Total.
Admitted from 16th March 1831, to } 30th September, 1840 }	1,013	1,016	2,029
Discharged during the { same period, viz.— { Cured . .	223	226	449
{ Relieved . .	42	24	66
{ Died . .	374	282	656
Total . . .	639	532	1,171
Remaining on 30th September, 1840	374	484	858

Proportion in 100 of patients discharged, viz.—

Cured . .	35•	42•	38•
Relieved . .	7•	5•	6•
Died . .	58•	53•	56•

It has been a question whether the deaths should be divided, as in this case, by the 2,029 patients admitted, or by the 1,171 discharged, in order to obtain the mortality of the cases. It is evident that the latter is the true divisor; for, if the mortality remained the same, the probability is that the 858 patients *to be discharged* would, *cæteris paribus*, be discharged cured, relieved, and dead, in the same proportions as the 1,171 already discharged.

The average number of lunatics in the Hanwell Asylum, since it was opened, has been about 589, or 250 males and 339 females. Subjoined is a table of nine annual enumerations, with which I have been favoured by Dr. Conolly:—

PATIENTS REMAINING IN THE HOUSE ON 31st DECEMBER.							
Years.	Males.	Females.	Total.	Years.	Males.	Females.	Total.
1831 . .	111	143	254	1836 . .	262	348	610
1832 . .	217	279	496	1837 . .	255	333	593
1833 . .	237	321	558	1838 . .	321	470	791
1834 . .	245	322	567	1839 . .	346	488	834
1835 . .	260	344	604				

* Visiting Justices' Report, p. 22. In p. 18, the number of deaths is stated to have been 664.

The deaths in the $9\frac{1}{3}$ years ending 30th September 1840 were 656 (males 374, females 282); and the insane population out of which they occurred was = 5,498 living one year; the males 2,334, and females 3,164. The average number of males resident was = 250, and $250 \times 9\cdot34$ years, the term of residence, = 2,334 years of life. The *annual mortality* of the men was 16 per cent., of the women 9 per cent., and of the whole population, without distinction of sex, 12 per cent.

What is the mean term of residence in the Middlesex Asylum?—This is not given in the Visiting Justices' Report, but it may be deduced from the numbers living, and the numbers discharged. Divide the 5,498 years of residence by 1,171, and the result is 4·48 years; which is an approximation to the average term of treatment. This is shewn in the following table:—

	Lunatics Discharged.	Years of Residence.	Mean Time of Treatment.
Males . . .	639	2,334	Years. 3·65
Females . .	532	3,164	5·95
Total . .	1,171	5,498	4·48

From this and the preceding table it will be observed that nearly equal numbers of men and women are admitted at the County Asylum, (males 1,013, females 1,016); but that the number of women resident is 36 per cent. greater than the number of men (females 339, males 250); because women remain there about 6 years on an average, and men nearly 3·7 years. The men are discharged more rapidly than the women, both by death and recovery. 11 men per cent. were annually discharged cured, or relieved; and only 8 women. This distinction will explain many anomalous facts; and it should always be taken into account in estimating the prevalence of diseases. Thus there may be ten times as many lunatics in civilized, as in barbarous countries and times; not because the tendency to insanity is greater, but because the lunatics live ten times as many months, or years. The tendency to insanity in a class is expressed by the proportion that become insane.

Let us now compare the facts observed in the Hanwell Asylum with those submitted to the Society by Colonel Sykes, relative to the lunatics in the licensed houses within the jurisdiction of the Metropolitan Commission. Colonel Sykes's Returns have been analysed according to the same methods.

	Total Number Discharged.	Discharged as Cured, or otherwise.	Died.	Deaths in 100 Cases.
Licensed Houses, from 11th August 1832, to 31st May 1839	5,747	4,021	1,726	30·
Hanwell Asylum, from 16th May 1831, to 30th September 1840	1,171	515	656	56·

The deaths to 100 cases were more numerous at Hanwell than at the licensed houses ; but, in the *annual mortality* per cent., the proportions were reversed.

	Years of Residence.	Died.	Annual Mortality per Cent.
Licensed Houses, from 30th June 1833, to 31st May 1839 }	9,671	1,504	15.5
Hanwell, from 16th May 1831, to 30th September 1840 }	5,498	656	11.9

The annual mortality per cent. at Hanwell was to that in the licensed houses as 100 to 130. For various reasons the patients remain longer in the Hanwell asylum than in the licensed houses, from which 37 per cent. were annually discharged alive; while 9.4 per cent. were discharged annually, cured and relieved, from the County Asylum. The number admitted during the six years, June 1833-39, into the licensed houses was 5,386; making 278 more than 5,108, the number discharged by death, recovery, or otherwise. There were 1,435 in the licensed houses on 30th June 1833, and 1,713 on 31st May 1839. The number of inmates had increased 19 per cent., and, notwithstanding the erection of Hanwell, the increase bore principally upon paupers, for 202 of the 278 were paupers.

MEAN TERM OF RESIDENCE.			
	Years of Residence.	Numbers Discharged.	Mean Term of Treatment.
			Years.
Hanwell (1831-40)	5,498	1,171	4.48
Licensed House (June, 1833-9) .	9,671	5,108	1.89

The lunatics in the licensed houses are divided into two classes—paupers, and other patients belonging to the independent classes of society. It will be right to compare the paupers in the licensed houses with the paupers in Hanwell, and, for this purpose, to separate the paupers from the other class.

The Licensed Houses—6 Years, June 1833-39.		
	Paupers.	Others.
Admitted.	2,939	2,447
Discharged	2,737	2,371
Died	947	557
Years of Residence .	4,580	5,090

The comparative mortality was as follows :—

	Annual Mortality per Cent.	Deaths out of 100 cases discharged.	Mean term of treatment, in years.
Paupers in Licensed Houses	21	35	1·67
„ Hanwell	12	56	4·48
Other patients in the Licensed Houses .	11	23	2·15

The annual mortality of paupers in the licensed houses is thus shewn to have been excessive.

I proceed to compare the mortality of the male and female paupers at Hanwell and in the licensed houses, with that of the other class of lunatics :—

In the Licensed Houses, June, 1833-39.				
	Paupers.		Others.	
	Men.	Women.	Men.	Women.
Admitted	1,419	1,520	1,419	1,028
Discharged	1,343	1,394	1,365	1,006
Died	504	443	353	204
Years of Residence .	1,882	2,698	2,677	2,414

From these facts the following results have been deduced :—

	Annual Mortality per Cent.		Deaths out of 100 Cases discharged.		Mean term of Residence in years.	
	Males.	Females.	Males.	Females.	Males.	Females.
Licensed Houses :—						
Pauper Lunatics	26·8	16·4	37·5	31·8	1·40	1·93
Other Lunatics .	13·2	8·4	25·9	20·3	1·96	2·41
Hanwell	16·0	8·9	58·5	53·0	3·65	5·94

It will be observed that the annual mortality of both male and female paupers in the licensed houses was *nearly twice as great as the mortality of paupers at Hanwell, and twice as great as the mortality of other lunatics in the licensed houses.*

Pauper lunatics were received at six licensed houses during the term over which Colonel Sykes's Returns extend, and at the four houses numbered 18, 32, 33, 35, during the whole period. A small number of paupers was treated at No. 2, until May 1837, and after that year at No. 12; the great majority, however, of pauper lunatics was treated at the four large houses, and although 1,156 other lunatics were treated there, with 2,563 paupers, the mortality was *twice as high* as in the 36 smaller houses.

LICENSED HOUSES.						
No. of House.	Years of Residence.	DISCHARGED.				
		Paupers.		Other Lunatics.		TOTAL.
		Cured, &c	Died.	Cured, &c.	Died.	Discharged.
18	1,571	317	206	142	49	714
32 (M.)	1,467	369	198	256	122	945
33 (F.)	1,635	371	187	199	48	805
35	1,687	594	311	268	82	1,255
4 Houses	6,360	1,651	902	865	301	3,719
36 ,,	3,311	139	45	959	256	1,389

Each of the four large houses contained 265 patients on an average, and the annual mortality was 19 per cent.; in the small houses, containing 17 lunatics on an average, the mortality was 9 per cent., and the annual mortality in the four houses increased with the number of lunatics. It was 16 per cent. in the house No. 18; 18 per cent. in Nos. 32 and 33; and 23 per cent. in No. 35. Of the higher class of patients, 26 in 100 cases perished in the large houses, and 21 in 100 in the smaller houses, where the term of treatment was somewhat longer.

What is the mortality among lunatics in favourable circumstances? Is insanity a fatal disease?—Upon the latter question there has been a considerable diversity of opinion. Some lunatics live to an advanced age. Of 213 admitted by Dr. Conolly at Hanwell, 15 were aged 60 and upwards, 1 was between 75 and 80; and 58 in 753 at Hanwell had been labouring under the disorder between 20 and 50 years. In 1835 an action (*Fisher v. Beaumont*) was brought at the York Assizes to recover from the *Providence Assurance Company*, 2,000*l.* insured upon the life of the Rev. Mr. F***. In charging the jury, the judge said that they had to consider whether insanity had a tendency to shorten life? If insanity had such a tendency, they must find for the defendant; if not, for the plaintiff. The medical evidence was conflicting; and the jury, after a short deliberation, found for the plaintiff, on the ground that insanity had no tendency to shorten life!*

We have no means of ascertaining the mortality of lunatics at large; but the mortality of lunatics in asylums is much higher than the mortality of the general population, and the excess cannot be ascribed entirely, although it may partially, to the confinement, the unwholesomeness, or the usages of mad-houses. The mean age of lunatics in asylums is about 35-40. The average age of the patients admitted at Bethlem, (1830-34) was 36 years (36·2); and the mean age of 213 admitted at Hanwell by Dr. Conolly was 36½. The mortality at the age 30-40 is 1·2, and at 40-50 is 1·5 per cent. in England and Wales. In cities the mortality at a corresponding age is not more than 2 per cent. annually. Now the annual mortality at Bethlem, where dangerous cases are carefully excluded, was 9 per cent., in 1827-39. At Gloucester, one of the county asylums, at which the treatment is the most successful,

* Medical Gazette, August 8th, 1835.

the diet is generous and nutritious, and the patients live as much as possible in the open air,—the annual mortality is 7 per cent.

The annual mortality of severe cases of insanity cannot, I think, in favourable circumstances, be less than 6 per cent.; so that the mortality is three times greater among lunatics, than among the general population, at the same age. We have seen, however, that the annual mortality among the better class of patients in the licensed houses was 11 per cent., among paupers at Hanwell 12 per cent., among paupers in the licensed houses 21 per cent., and among pauper men at one licensed house 27 per cent;—as high as the rate of mortality experienced by the British troops upon the western coast of Africa, and by the population of London when the plague rendered its habitations desolate!

To what is this excessive mortality to be ascribed—to the disease, or to the treatment?—The question cannot be positively answered, nor can the causes of the difference in the mortality be determined, without a careful examination of all the circumstances. I shall briefly notice the chief causes to which the mortality of lunatics in asylums *has been, or may be*, ascribed.

The visiting justices of Hanwell state as “an extraordinary and disgraceful fact,” that numbers of patients are sent into the asylum, as it would seem, to die. Of 656 deaths, 64 occurred within a month after admission. A similar complaint is made at many hospitals; and there is probably a tendency to send dangerous cases, or cases in their most critical stage, to public institutions. The exclusion of such cases from Bethlem reduces the mortality, but they cannot all be excluded without giving the asylums the advantages of that *selection*, which is so profitable to Assurance Offices. For in a disease so fatal as insanity, a certain number of lunatics are necessarily on the verge of death at the period of the disease when admission into an asylum is usually sought; and a due proportion of such cases cannot fairly be excluded.

Reference has also been made to the fact that out of 834 patients in Hanwell on December 31st, 1839, about 655 had been in other asylums, or workhouses, for considerable periods. Many cases were admitted in the chronic stages of insanity; but this, though it will account for a smaller number of recoveries, and the high proportion of fatal cases, will not account for a high *annual rate* of mortality. The *annual rate* of mortality is greater in the acute than in the chronic stage of insanity. Thus at the hospitals of Bethlem and St. Luke the annual mortality among the class called “curables” was 11 per cent., and only 6 per cent. among “incurables” (chronic cases). At Hanwell the annual mortality of lunatics in the state of mania, monomania, or melancholia appears, so far as it can be determined, to be about 12 per cent., while in cases of incoherence, imbecility, or dementia, (chronic stages of insanity,) about 8 per cent. die annually.

A return in the Hanwell Report shews the numbers admitted during each separate year into the asylum, and the numbers discharged cured, relieved, or dead, year by year. The return extends from May 16th, 1831, to September 30th, 1840. From this table we learn that 422 lunatics were admitted in the year 1832; that 55 of them were cured or relieved, and 55 died during that year, leaving 312 to enter upon the next year (1833), when 27 of them were cured or relieved, and 31 died; and so on, year succeeding year, until September 30th, 1840, when 137 re-

mained in the asylum. The patients admitted in 1831, and in 1839-40 (the two last years), have been set aside ; and the 1,389 lunatics admitted in the seven years (1832-38) have been followed to the end of 1839. The 422 lunatics, it may be assumed, were admitted at equal intervals of time in 1832, or the middle of the year 1832 may be taken as the mean time of their admission ; whence it follows, that of 422 admitted in the year 1832, 55 died in the *half-year* following ; 31 in the next *year*, &c. The table, therefore, permits us to trace 422 lunatics admitted in 1832, to death, recovery, or relief, during $7\frac{1}{2}$ years ; and 325 admitted in 1838 to the end of 1839, or for a period of only $1\frac{1}{2}$ year. The subjoined table presents a summary of these interesting facts ; which in the form of publication are analogous to the tables of lives published by the *Equitable Society* :—

Table of the Deaths and Recoveries in different stages of Insanity.

Years.	Entering on each period.	In the succeeding Periods.			Remained in the Asylum at the end of the Period.
		Cured.	Relieved.	Died.	
0•	1,389	125	25	152	••
0•5	1,087	142	13	130	208
1•5	594	14	9	42	30
2•5	499	9	••	45	46
3•5	399	10	2	28	51
4•5	308	6	2	20	34
5•5	246	4	••	21	66
6•5	155	4	1	6	144

The table is read thus :—Of 1,389 lunatics *entering* upon the *first* period ($\frac{1}{2}$ year) 125 were discharged cured, 25 relieved, and 152 dead in the next *half-year* ; of 1,087 who entered upon the *second* period, 142 were discharged cured, 13 relieved, and 130 dead in the subsequent *year*, at the end of which 208 were lost sight of. For the reason before stated, it will be observed that the *first* period extends to the end of the 6th month ; the second from the end of the 6th to the end of the 18th month ; the third from $1\frac{1}{2}$ to $2\frac{1}{2}$ years, &c.

From this arrangement of the facts, the annual rate of mortality and recovery in the several stages of insanity, subsequent to admission, at Hanwell, may be deduced.

Table of the Number of Insane Persons living, cured, and dead ; and of the Annual Rate of Mortality in different stages of Insanity.

No.	Period of the disease from the date of Admission.		Number living one year.	Cured or relieved.	Died.	Out of 100 living, one year.	
						Cured or relieved.	Died.
	Years.						
1	0	$0\frac{1}{2}$	619	150	152	24•2	24•6
2	$0\frac{1}{2}$	$1\frac{1}{2}$	944	155	130	16•4	13•8
3	$1\frac{1}{2}$	$3\frac{1}{2}$	1,033	32	87	3•1	8•4
4	$3\frac{1}{2}$	$5\frac{1}{2}$	673	20	48	3•0	7•1
5	$5\frac{1}{2}$	$7\frac{1}{2}$	383	9	27	2•3	7•0
	0	$7\frac{1}{2}$	3,652	366	444	10•0	12•2

The numbers stated to have been *relieved* were 14 per cent. of the numbers *cured and relieved*; and as the proportion remained nearly the same through the seven years, the two classes of facts have not been distinguished.

The annual rate of recovery in the *first half-year* was 24 per cent; and the rate of mortality was nearly 25 per cent. The two rates remain high in the *second period* (the rate of recovery 16, and of mortality 14, per cent.), while they declined respectively to 3, and to 8 per cent. in the *third period*; and to 2·3, and 7·0 per cent. annually, between the $5\frac{1}{2}$ and $7\frac{1}{2}$ years after admission into the asylum.

The rate of mortality in an unit of time increases as the malady advances up to a certain point, and then declines regularly, in all diseases which have hitherto been investigated arithmetically. In cholera the rate of mortality is highest at 18 to 24 hours; in small-pox, the mortality is highest from the 10th to the 15th day; in consumption the rate of mortality appears to be greatest from the 6th to the 9th month. The variation in the rate of mortality and recovery in small-pox is shewn below:—

Days of the Disease* .	5-10	10-15	15-20	20-25	25-30	30-35	35-40
Daily Deaths in 100 living .	6·4	31·5	27·2	8·5	4·3	2·8	2·0
Daily Recoveries in 1000 . .	·1	·2	1·8	9·2	19·7	34·8	47·5

Insanity is regulated by analogous laws; and a majority of the patients are admitted at Hanwell before the disease has passed the point at which the mortality declines, although many are admitted afterwards, when the rate of recovery is reduced much more than the rate of mortality.

At Hanwell, 18 in 100 living die annually in the first $1\frac{1}{2}$ year; and 8 in 100 annually for 6 years afterwards. If an asylum, therefore, contained none but persons in the first year and a half of the disease, (after admission is always understood,) the mortality would be 18 per cent.; while it would be 8 per cent. in an asylum for chronic cases between $1\frac{1}{2}$ and $7\frac{1}{2}$ years. Without implying any disparagement to the treatment in the former case, the rate of recovery in the two asylums would differ in a still greater degree, as it would be 19 per cent. in the first asylum, and only 3 per cent. in the second, set apart for the exclusive reception of the advanced cases. This separation seldom takes place in practice. The chronic and acute cases are always mixed in an institution like Hanwell; but it is evident that in the first years after it was opened, the proportion of cases in the early stages must have been greatest, and the proportion of lunatics in advanced periods of the disease must have since progressively increased. According to the above laws, the proportion of deaths and recoveries should gradually have declined, and this was the fact.

* British Medical Almanack, 1838, p. 212.

Periods of Three Years.	Lunatics* existing One Year.	Died.	Recovered.	Annually out of 100 living.	
				Died.	Recovered.
1831-3	1,147	197	165	17·2	14·4
1834-6	1,754	194	119	11·1	6·8
1837-9	2,121	215	163	10·1	7·9

The annual mortality was 17 per cent. in the first three years, and 10 per cent. in the last three years; the annual rate of recovery was 14 per cent. in the first, and 8 per cent. in the last period. In the licensed houses which have been many years in existence, the annual rate of mortality was 13·6 per cent. in 1833-36, and 17·2 in 1836-39!

When the rates of mortality and recovery in the several stages of insanity are ascertained, the effects of treatment and external influences can be compared in asylums containing the various classes of patients, in proportions as different as at Hanwell in 1831-33, and 1839-40. The rule is :—multiply the number of lunatics existing at the several periods of the disease by the corresponding rates of mortality and recovery (0·242, 0·246, &c. &c., p. 25), and the sum of the products will represent the number of deaths and recoveries. By this rule the deaths in Hanwell during the 1¼ year, ending September 30th 1840, should have been about 149, and they were 128; the numbers cured or relieved should have been about 126, and they were 154.

It will be found by this rule that the rate of mortality among paupers in the licensed houses, and in Hanwell, has differed less than the first results of the returns would lead us to suppose, although it has been excessive in both. The paupers remain little more than a year and a half (1·67) in the licensed houses, in which the annual mortality was 21 per cent.; at Hanwell the annual mortality in the first 1½ year after admission was 18 per cent.

From the facts given at page 25, part of a table of mortality and recovery may be constructed for lunatics.

Nosometrical Table.

No.	Period of the Disease dating from the day of Admission.	The Number of Lunatics who			Cases terminating in each Period.		
		Enter upon each Period.	Will Recover.	Will Die Insane.	Total Number.	By Recovery.	By Death.
	Years.	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>
1	0	1,000	380	620	217	108	109
2	0·5	783	272	511	213	112	101
3	1·5	570	160	410	61	21	40
4	2·5	509	139	370	48	12	36
5	3·5	461	127	334	43	11	32
6	4·5	418	116	302	41	11	30
7	5·5	377	105	272	35	9	26
8	6·5	342	96	246	32	8	24
9	7·5	310	88	222	..	..	..

If we take 1,000 lunatics at the stage of the disease corresponding to

* Deduced from annual enumerations of the males and females; the years of life = 5,022. From daily enumerations the years of life = 4,936.

the time of admission at Hanwell, 217 will be discharged (108 recovered or relieved, and 109 dead) in the half-year following, leaving 783 to enter upon the second period, to be reduced year by year, until at the end of $7\frac{1}{2}$ years only 310 remain. The range of the present series of observations extends no further, but the relative proportion of recoveries and deaths remains nearly as 88 to 222 during the last six years; and to complete the scheme of the table it may be assumed that 88 of the 310 will recover, and 222 will die. The columns *b*, *c*, shew, therefore, that of 1,000 cases, 380 will recover, and 620 die; that at the end of $1\frac{1}{2}$ year, 160 will recover, and 410 will die.

The columns *e*, *f*, shewing, first, the numbers cured ("or relieved," is understood invariably); and, secondly, the numbers dying in each period are readily deduced from the table at p. 25. Thus 150 were cured, and 152 died in the first half-year, out of 1,389 cases; consequently, 108 were cured, and 109 died out of 1,000 cases, which form the basis of the new table. As 217 cases terminated during the first half-year, 783 entered upon the second period, when the amount of recovery having been $= \frac{15}{108} \frac{5}{87}$, and the mortality $= \frac{15}{108} \frac{3}{87}$, exactly 112 recovered, and 101 died. By continuing the process, the deaths and recoveries are obtained for each year. The columns *a*, *b*, *c*, are obtained by the successive subtraction of the numbers in columns *d*, *e*, *f*, and the first number (620) in column *c*, is the sum of those who died in the $7\frac{1}{2}$ years, $= 398 + 222$, the number who, it is presumed, will die insane after that period.

The numbers representing those who will die and recover (columns *b*, *c*,) decrease at a uniform rate after the second year, and the seven terms of the series, column *c*, are obtained by multiplying the last (222) successively by 1.1075 (log. 0.044338); the six terms in the series, column *b*, are deduced in the same way, from 88 raised successively by the rate 1.0966 (log. 0.040072). The two series of numbers obtained by the hypothesis, agree very closely with those directly deduced from the observations—

Years . .		$1\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{2}$	$4\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{1}{2}$	$7\frac{1}{2}$
Numbers to die insane .	Direct observation	417	376	330	298	271	239	226
	By Hypothesis .	410	370	334	302	272	246	222
Numbers to recover	Direct observation	..	138	129	115	104	98	87
	By Hypothesis .	..	139	127	116	105	96	88

Halley invented the Table of Mortality, which consists of three columns, shewing the number of persons who die or survive in each successive year. The events it exhibits are of one kind; all the persons die. But cases of *disease* may terminate in two ways—by death, and by recovery. A different tabular construction was therefore required for sick persons, such as the one preceding, from which the *mean future duration*, the *probable duration*, the *probability of recovery*, and the *probability of a fatal termination* in any given time, can be determined at any period of the disease.

The *mean future duration of insanity*, or the *expectation of disease*, cannot be deduced from the preceding table, because it breaks off at the end of $7\frac{1}{2}$ years; but if the annual rate continued the same ($1\cdot10$), 7 of 310 would remain insane 40 years, and the mean future duration of insanity at the period of admission at Hanwell would be $6\cdot7$ years; at the end of half a year it would be 8 years; and after $1\frac{1}{2}$ year, it would be 10 years.

In the six years 1834-39, when the inmates were $\approx 3,875$ living 1 year, 706 were discharged; one in $5\cdot5$ therefore was discharged annually. If the institution had existed several years, and the numbers admitted and discharged had been equal, the mean duration would have agreed with this, and have been $5\cdot5$ years; but as Hanwell was opened in 1831, and only 1,179 out of 2,029 admitted, had been discharged on the 30th September, 1840, the $6\cdot7$ years is probably nearer the true mean duration.

In determining the mean term of treatment, which was attempted in the early part of this paper, it may at first sight seem that the years of residence should have been divided by the mean of the numbers admitted (2,029), and discharged (1,171). This method would make $4\cdot8$ years the mean term of treatment in the six years ending 1839—(for $\frac{3\cdot8\cdot7\cdot5}{5\cdot0\cdot1} = 4\cdot8$); and $1\cdot9$ year the mean term of treatment in 1831-3; when 920 were admitted, 362 discharged, and the years of residence were $\approx 1,248$. Divide 1,248 by the number discharged (362), and $3\cdot44$ years would be the given term of treatment; but even this, as the experience of the six following years evinces, is much below the truth. The errors are the same as if the division of the children under three years old by the mean number of births and deaths, or by the deaths alone, were supposed to give the expectation of life at birth; whereas the division by the deaths at that early period, though the nearest approximation of the two, gives a less number than the expectation of life in years.

Dr. Conolly ascertained the previous duration of the disorder in 191 cases (exclusive of 10 congenital cases) admitted during the year; 66 had been labouring under the disease less than six months; 26 between 6 and 12 months; 24 between 1 and 2 years; and 1 had been insane 39 years. The mean previous duration was $3\cdot4$ years. But, as little more than *half* the number had been insane *twelve months*, the time of admission may be represented by 1, or $1\frac{1}{2}$ year.

The mean age of 213 persons at admission was $36\frac{1}{2}$ years; the mean age of 195 at the time of the *first attack* of insanity was stated to be $32\frac{1}{2}$ years.

The *probable future duration of insanity* is shewn, by table, p. 27, to be $2\frac{1}{2}$ years at the time of admission; for, in $2\frac{1}{2}$ years, the 1,000 cases are reduced to 509. The chances that a patient will, or will not, remain insane $2\frac{1}{2}$ years are 509 to 491, or nearly equal. Among those who remain insane half a year after admission, the probable future duration of the disease is nearly 4 years.

The *probability of recovery* at admission $= \frac{3\cdot8\cdot0}{1\cdot0\cdot0} = \cdot380$; of dying insane $= \frac{6\cdot2\cdot0}{1\cdot0\cdot0} = \cdot620$. Half a year after admission the probability of recovery is $\frac{2\cdot7\cdot2}{7\cdot8\cdot3} = \cdot347$; of dying insane $\frac{5\cdot1\cdot1}{7\cdot8\cdot3} = \cdot653$. The numbers in juxta-position, in columns *b* and *c*, express the respective chances of death and recovery; thus, $5\frac{1}{2}$ years after admission at

Hanwell, the chances are 272 to 105 that a lunatic will *not* recover. All these probabilities depend more or less on the assumption that 88 in 310, remaining at the end of $7\frac{1}{2}$ years, will ultimately recover.

The *probability of recovery, or of dying*, within any year, or years, up to $7\frac{1}{2}$, is accurately shewn by the table. In the first half-year the *probability of recovering* is $\frac{100^8}{1000} = \cdot 108$; the probability of recovering in $3\frac{1}{2}$ years is $\frac{380-127}{1000} = \frac{253}{1000} = \cdot 253$. Out of 1,000 cases, 253 recover in that time; hence $\cdot 253$ is the probability of recovery. The *probability of dying* in the first half-year is $= \frac{100^9}{1000} = \cdot 109$; in the two years following $\frac{511-370}{783} = \frac{141}{783} = \cdot 180$.

From a table of this kind the lives of lunatics can be insured; and, from the present table, they may be insured for a limited number of years.

The table is an instrument by which the effects of treatment on the mortality—the number of recoveries—and the duration of all diseases, can be accurately measured. It enables us to compare two or three different plans of treatment, and to determine their effects upon the principal results at which all medical treatment aims—the reduction of the mortality, and of the duration of the disease. Thus if 139, of 509 lunatics that have been $2\frac{1}{2}$ years in Hanwell, will recover under the present treatment, and 200 recover under any new mode of treatment that may be introduced, the advantages of the latter would be obvious; and still more so, if the *probable duration* of the disease were reduced from 10 to 5, or 2, years.

The returns from the licensed houses do not state the ages; and the ages of few lunatics are given in the interesting Report of Dr. Conolly. From other observations it is known generally that the mortality increases, and that the probability of recovery declines, as age advances.

The sex, age, and stage of the disease are the principal internal causes that influence the mortality, except the form of the disease which, exclusive of congenital idiocy, may be, perhaps, reduced to an element already discussed—the “stage of the disease.” The influence of complications, of sex, and of age, may be assumed to be nearly the same in the licensed houses and Hanwell, as in ordinary asylums—the asylum, for instance, at Gloucester, where the mortality does not exceed 7 per cent. annually. The mortality of 7 per cent. may be fairly ascribed to insanity. The excess above this must be attributed to the diseases generated by the limited space in which the unhappy lunatics are confined—to the collection of large numbers under the same roof—the impurity of the atmosphere—the want of exercise and warmth—the poor unvaried diet—and the deficiency of medical attendance.* But the influence of these agents can only be ascertained by a Parliamentary inquiry; and it will not be denied that the causes should be investigated which raised the mortality of lunatics above the standard—57 per cent. among private patients, 71 per cent. at Hanwell, and 200 per cent. among paupers in the large licensed houses!

The Bethlem Hospital differs essentially from the Hanwell Asylum,

* The diet and the condition of lunatics at Hanwell have been latterly ameliorated very considerably by the Visiting Justices, at the suggestion of the present accomplished Physician; and the mortality may be expected to be reduced in proportion. It is also right to state that in some licensed houses the mortality of private patients does not exceed 7 per cent.

as well as from the majority of the licensed houses, in the stricter selection of patients for admission. By the rules the following cases are inadmissible:—lunatics who have been insane for more than twelve months; who have been discharged uncured from other hospitals; in a state of idiocy; afflicted with palsy, or with epileptic, or convulsive, fits; and suffering from any dangerous disease. Notwithstanding the instructions in the admission papers, the petitions of 58 out of 311 (19 per cent.), who applied in 1836, were rejected. The patients are not allowed to remain longer than one year. 253 lunatics admitted in 1836 had been insane 83 days, on an average; 117 had been insane less than a month.

It would be exceedingly interesting to determine the mortality of this selected class of lunatics for 12 months. But, if dangerous symptoms come on at Bethlem, the patients are dismissed, when practicable, as *improper objects*. Thus of 3,026 discharged in 10 years, 829 were dismissed uncured, 483 as *improper objects*, and 145 dead. A great number of the “improper objects” would die soon after they left Bethlem; and their dangerous state, or supposed incurability, was the alleged cause of their dismissal. Paralysis, however slight, even of a finger, is the forerunner of death in the insane; and of 210 dismissed as improper objects (1831-36), 87 were paralytic, 59 “sick and weak,” 24 epileptic, 4 apoplectic, 2 had “fits,” and 28 were idiotic.

The lunatics at *Bethlem* are divided into three classes; “curables,” “incurables,” and “criminals.”

CURABLE LUNATICS, 1827-39.			
	Men.	Women.	TOTAL.
Admitted	1,168	1,707	2,875
Discharged	1,145	1,654	2,799
Discharged as cured . . .	545	961	1,506
Improper objects . . .	236	166	402
Dead	75	69	144
At request of friends . .	19	17	36
Uncured	254	422	676
Leave of absence expired	16	19	35
Out on leave of absence .	49	73	122
Years of life	637	1,002	1,639
„ (exclusive of those out on leave of absence) . . }	..	..	1,371

21 of the lunatics on the list of the hospital were constantly out on leave of absence; and during the 13 years, 122 individuals were discharged as “out on leave of absence.”

Of 100 “curable” patients discharged, 54·5 were cured, 5·2 died. The mean term of treatment was ·586 year, = 7 months; or ·49 year, = 6 months, if the time spent out of the hospital, on leave of absence, be excluded. The lunatics discharged as “improper objects” were 14·5 per cent.; a considerable portion of whom would have been numbered with the dead if they had remained.

The *annual* mortality was 8·8; the recoveries 92· per cent.; 24·5

per cent. were discharged as improper objects, 43·4 were discharged uncured; 2·1 were out on leave of absence. 171 were discharged annually out of a constant population of 100.

If the deaths which occur among those out on leave of absence are not recorded, the annual mortality to 100 resident in Bethlem is 10·5.

Incurables.—72 “*incurables*” were admitted; 72 discharged (33 men, 39 women), and the average number resident for 13 years was 64·2. The years of life were therefore $= 64·2 \times 13 = 834$. Nine incurables were cured, 39 died, and 24 were discharged at the request of their friends.

Of 100 cases 13 recovered, 33 did not recover, and 54 died. One in 11·6, $= 6$ per cent. were discharged annually; the mean term of residence was 11·6 years. 1 in 21, $= 4·7$ per cent. died, and 1 per cent. was cured annually.

“*Incurables*” is an improper term; but it is a recognition of the law that recovery is infrequent in advanced stages of insanity.

Criminals.—In the 13 years 71 criminal lunatics were admitted at Bethlem (56 men, 15 women); 51 were discharged, namely, 26 died, 2 escaped, and 23 recovered. The average number resident was 57·3, the years of life 745.

Of 100 cases, 45 recovered, 51 died. The annual rate of mortality was 3·5, of recovery 3·1 per cent.; the mean term of treatment deduced from the years of life, and the number discharged, was $14\frac{1}{2}$ years. The numbers admitted and discharged in the 11 years (1827-37) were nearly equal (36 and 39); and the years of life divided by the number discharged $= \frac{653}{39} = 16·7$ years.

It is evident that several of the criminals, such as Oxford, cannot properly be said to labour under insanity—in the sense of a disease. It is, if anything, like idiocy, a congenital misdevelopment of the brain.

The number of recoveries is considerable at Bethlem, but less than at some private asylums, notwithstanding the careful selection of cases. The mortality is reduced by excluding dangerous cases, and by dismissing the patients on the verge of death, as “*improper objects.*” It is difficult, under these circumstances, to account for the death of nine or ten in 100 annually, upon any other supposition than that the mortality is high at the early stage of the disease in Bethlem.

The last Committee of the House of Commons on Lunatics, stated in their report, “It has been clearly established in evidence, that there is no due precaution *with respect to the certificates of admission, to the consideration of discharge*, or to the application of any curative process, to the mental malady.”* Lunatics under confinement, it should be well recollected, are *prisoners*; and every one will admit that the depriving a man of his personal liberty, or turning loose a lunatic on society, are acts involving great responsibility,—a responsibility which, if it exist at all, is very imperfect in the present state of the law. In order to deprive a lunatic of his estates, a formal inquiry is publicly instituted; but a person who has been seven days chargeable to the parish may be committed as a lunatic to the County Asylum by two justices of the peace on the certificate of *any* physician, surgeon, or apothecary, asserting that the “*said person appears to be insane of mind.*” 2,780 pauper lunatics

* Report, 1827, p. 4.

are confined under these certificates in the county asylums*. But there are 1,389 lunatics, and 7,007 idiots, "under the care of the parish officers as in-door or out-door paupers." Many of them are necessarily under restraint, without either warrant or certificate; which is only required when the parishes think it necessary to send them to a public asylum, where their treatment costs two or three times as much as the work-house fare.

Paupers may be sent to licensed mad-houses by a justice, or by the officiating clergyman and overseer, with one medical certificate; and other persons may be sent to a licensed house by any layman, upon the certificates of *any two* medical men.† It appears also that by law, any person whom the governors choose to admit as a lunatic, may be confined at Bethlem, or St. Luke's Hospital, for an unlimited time.

The liberation of persons in confinement as lunatics, takes place under no better regulation. Medical visitors have been appointed, in the words of Lord Lyndhurst "to see that the Chancery lunatics are well cared for, but above all *to watch the least glimmering of returning sanity, and see that the parties are not detained one day longer than necessary.*" The relatives, parish-officers, proprietors, justices in petty-sessions, and the Metropolitan Commissioners release lunatics from the licensed houses; but the mode in which this is effected is by no means satisfactory. "When once" says Colonel Sykes "they (pauper lunatics) get shut up in a mad-house, it is indeed difficult for them to regain their liberty."‡ Lunatics are discharged at the discretion of the visiting justices from the county asylums; by the governors from Bethlem, St. Luke's, and other hospitals supported by subscription; and by the parish officers from workhouses.

Many cases of abuse have occurred under the present system, which will be probably thought by the Society to require extensive alterations. And although there would be much difference of opinion on many points, all will probably agree that *no person should be placed under restraint as a lunatic in asylums, hospitals, or houses of any kind, who has not been examined by a public officer, practically acquainted with insanity.* I would therefore suggest that by some modification of the present system of inspection, the circumstances of every lunatic confined should be investigated personally by a crown officer, and recorded previous to committal, at the expiration of every quarter of a year after admission, and at the time of dismissal. The sex, and age, the stage, form and complications of insanity should be registered, on entering and leaving the several institutions, by impartial officers. This would be a protection to lunatics, and to the public; the deaths and recoveries would be registered on a uniform plan, and an invaluable statistical check on the results of treatment would be obtained.

We may then discover the causes of insanity, the laws which regulate its course, the circumstances by which it is influenced, and either avert its visitations, or mitigate their severity; perhaps, in a later age, save mankind from its inflictions, or, if this cannot be, at any rate ensure the sufferers merciful treatment.

* Return to the House of Commons, 5th July, 1836.

† 9 Geo. IV., c. 40; 2 and 3 Will. IV., c. 107; 3 and 4 Will. IV., c. 107.

‡ Journal of the Statistical Society, vol. iii., p. 146.

Remarks on the Abstract of the Parish Registers of Tavistock, Devon.

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[*Read before the Statistical Society of London, 18th January, 1841.*]

THE Parish Registers of this country have been of late years evidently regaining a large share of the confidence and credit which they had lost towards the close of the last century, in consequence, mainly, of the sweeping censure of Dr. Price; and their value, as depositories of statistical data, has been constantly rising in the estimation of that growing class, whose attention has been directed to the application of the numerical method to the analysis of the facts of social life. Hitherto, however, these parochial documents have not been made extensively available for such purposes; and it is in the belief, that the accompanying Abstract of the Parish Registers of Tavistock may possess some slight claims to notice as an example, and possibly some rudiments of a suitable method as a model, that it is submitted to the Society.

There can be little doubt that a series of similar documents, relating to a large population and to an extensive period, and embracing every variety of physical and social condition, would afford materials from which several important laws, general as to this country, might be satisfactorily deduced; whilst the disturbing forces in their nature and amount—in other words, the laws special to particular localities—would come out in the working of the problem.

That the parish registers are imperfect is acknowledged on all hands, and every estimate of population grounded on them must be looked upon as merely approximative. It should not, however, be forgotten that they constitute by far the best evidence now to be obtained; and that a judicious selection of places and periods, in which the entries are known to be nearly perfect, may enable us to arrive at inferences probably very near the truth. But to many interesting points of enquiry the incompleteness of the registers is of very little importance. In the case before us, for example, an attempt has been made to exhibit the varying rate of mortality in the different months. It is clear, in this instance, that the non-entry of any given proportion of the total burials would not affect the accuracy of the results, provided it bore equally upon every month; and it is every way probable that it would do so. The same reasoning is almost as just with respect to the monthly averages of baptisms and marriages, and other curious enquiries which it is needless to particularize.

The value of such results is too evident to require illustration. Looking at a single point, the proportionate burials in different months, we learn, among many other things, what, for the several seasons, is the tendency to death generally; the tendency to epidemics and pestilence; and more recently the tendency to these in connexion with the ages of the buried. This knowledge is highly valuable to the inhabitants of the locality concerned, irrespectively of any other; but when compared with the results obtained from various places; when their higher or lower mortality is displayed on a large and convincing scale; when the

causes of these differences are ascertained topographically; advantages, when possessed, will be duly appreciated, and the remedies for evils, or at all events the methods of escape from them, will be readily inferred, while the treatment and prognosis of disease will gain greatly in precision.

It is clear that only from the records of a long period of time on the one hand, and from those derived from localities, in various circumstances and conditions, on the other, can inferences, worthy of confidence as general truths, be deduced. These requisites belong to the parish registers, and, as regards this department of enquiry, to no other documents extant in this country. The accompanying Abstract enters very minutely into numerical details, the data being in all such cases of far more value than the commentary. The omission of the sexes of the buried was noticed when it was no longer in the power of the writer to supply it. With this exception, he believes that every important particular is stated. The division into decennial periods is practically very convenient, and will allow of the ready comparison of returns from different places, as well as of much facility of entry and calculation. The diagrams will, it is believed, communicate the chief results in a rapid manner, and accurately enough for the purposes of those who have not leisure or inclination for the study of arithmetical particulars.

Before entering on the consideration of the Abstract itself, it may be well to give some slight account of the locality concerned. The parish of Tavistock is adjacent to the western extremity of Dartmoor, and extends between it and the river Tamar. Its character is accordingly strictly promontane. Hills, from three to six hundred feet in height, rise in continued succession, and are separated by valleys, often deep and narrow, the general direction of which is from N.E. to S.W. A survey of the parish was taken in the year 1781, at the request of the Rev. John Howlett. At that time the land, exclusive of the houses and gardens in Tavistock, and of the highways through the parish, was occupied as follows:—

	Acres.	Roods.	Poles.	
The site of the Abbey . . .	172	0	33	
Arable and pasture land . . .	9,505	3	20	
Coppice wood, and timber . . .	1,187	1	21	
Commons	3,122	1	38	
Total . . .	13,987	3	32	or nearly 22 sq. miles.

The changes which have since taken place are chiefly very recent, and not of any importance in their bearing on the present enquiry.

The population and the number of houses and families were, according to the same survey,*—

	Inhabitants.	Houses.	Families.
In the Borough	2,399	441	610
,, East Division	286	54	54
,, North-west Division	222	35	38
,, South-west Division	210	39	46
Total . . .	3,117	569	748

* This statement is entered on the parish register, and signed by the Rev. J. Jago, the vicar.

The returns made under the last three censuses were as follows :—

	1811	1821	1831
Houses—number inhabited	495	680	778
,, by how many families inhabited	1,026	1,194	1,089
,, number building	8	23	3
,, ,, uninhabited	11	7	40
Occupations—families chiefly employed in agri- culture	343	375	94
,, families chiefly employed in trade, &c.	564	468	308
,, all other families not comprised in the two preceding classes	119	351	687
Persons—Males	2,209	2,563	2,635
,, Females	2,514	2,920	2,967
Total	4,723	5,483	5,602

The more minute distinctions noticed in the census of 1831, were,—

Males 20 years of age	1,302
Occupiers employing labourers	63
,, not employing labourers.	11
Labourers employed in agriculture	272
,, ,, manufactures	1
,, ,, retail trade or handicraft, as masters or workmen	459
Capitalists, bankers, professional, and other educated men	104
Labourers employed in labour not agricultural	276
Other males 20 years of age (except servants)	46
Male servants 20 years of age	70
,, under 20	70
Female servants	288

The greater part of the considerable increase in the number of houses in 1821, is to be attributed to the extension of mining operations. That the number of families was really less in 1831, whilst the population was decidedly greater than in 1821, is scarcely to be believed. The very small number of families returned as employed in agriculture in 1831, compared with 1811 and 1821, is, of course, but one among a multitude of cases which serve to illustrate the difficulty of framing queries sufficiently explicit to be generally understood in one uniform sense.*

The town of Tavistock, the population of which constitutes so large a portion of that of the whole parish, is situated on the north-west bank of the Tavy, which here flows rapidly through a narrow valley, from which the ground rises steeply, on both sides, to the height of several hundred feet. A secondary and very contracted valley, or rather gully, from the north, is also occupied by houses closely packed together.†

* The number of acres contained in the borough and parish is stated in the census of 1831 to be 11,660, whilst the measurement above given is 13,987. It is probable that the latter included some lands within the bounds of the borough, which are not comprised within the parish. However the difference arose, it cannot have any important bearing on the population, as no lands which could have been thus included contain, or have contained, many houses.

† The whole district is geologically primitive, the higher grounds towards the moor being granitic, and the neighbourhood of the town schistose.

The parts of the town built on higher ground to the north, or overlooking the more expanded valley to the west, are of more modern date, and therefore less connected with the period to which the registers chiefly relate. The same may be said of the larger villages now in existence, which were quite inconsiderable a few years ago.

The climate is very variable; the extremes of heat and cold are greater than at Plymouth, although the mean temperature of the year is but slightly different, being rather above 50°. The average amount of rain falling in the year is about 45 inches. The most populous part of the town is very often involved in fog during the night.

The occupations of the inhabitants are such as generally attach to rural or urban life, as may be inferred from the several accounts of the town and country population. A slight modifying influence has been introduced by the neighbouring mines, and some small manufacturing establishments, but it is of too recent a date to disturb the conclusions at which we have arrived.

The only disease endemic in the neighbourhood is goître, the occurrence of which is frequent. Erysipelas has often been severe, and fevers have proved obstinate in some localities. The cholera, however, though twice or three times introduced, did not take root, nor spread beyond the persons first attacked; an exemption the more remarkable, as the neighbouring town of Plymouth was most severely visited by this scourge; and as the situation of Tavistock, on a river which empties itself into Plymouth harbour, is such as has in other instances apparently favoured the spreading of the disease. The dreadful havoc caused by the plague, in 1626, serves to shew that a similar immunity to that recently enjoyed cannot be counted on, if another pestilence should occur.

For some time after the period when the registers commence, the church of Tavistock was resorted to by some parties resident in other parishes, in consequence, no doubt, of a continuance of the respect attaching to the ecclesiastical superiority of the Abbey before the Reformation. The number is, however, too small sensibly to influence the results.

The period comprised in the Abstract* is from 1617 to 1836 (both inclusive). The registers open two or three years earlier, but with some irregularity. The entries are made in the German text up to the end of the year 1680. Some new arrangements were made, as is well known, under the Commonwealth. These commence from September 29th, 1653. The births were then registered instead of the baptisms; and in the register of marriages, the days of publication of banns were entered, and the name of the Justice of the Peace by whom the parties were married. About the time of the Restoration, the old system was resumed.†

To commence then with the baptisms:—

The total number baptized in the 220 years, was 20,538. Of these

* The writer has to acknowledge the kindness of the Rev. Edward Bray, vicar of Tavistock, in facilitating his enquiries; and that of the Rev. Thomas Stabback, vicar of Cubert, in assisting him in making the Abstract, at no small expense of time and labour.

† The annual tables, from which the following abstracts are compiled, are printed in Part IX. of the "Tables of Revenue, Population, and Commerce," published by the Statistical Department of the Board of Trade.

10,414 were males and 10,124 females, or 35 : 34 (nearly). The number of twin births registered was 121, but they appear to have been noticed only when the children born were both of the same sex. Of the above number, 73 were male and 48 female couples; or, 146 male children and 96 female. The number registered as base-born is 731. Of these, 393 were males and 338 females; or, 39·5 : 34· (nearly).

The much larger proportion of males among the twin births and the base-born, is in accordance with other observations. This disproportion will be made still more evident by the subtraction of those two classes from the general total; the remainder will be 9,875 males, and 9,690 females, which will be :: 49 : 48 (nearly); whilst in those two classes, separately, the numbers are 539 males and 434 females; or in a greater ratio than 5 : 4.

The numbers baptized in the different months, distinguishing the sexes, with the number of base-born and twin births, are stated in the following table, for the whole period of 220 years.

Table of Baptisms, 1617 to 1836.

MONTHS.	BAPTIZED.			BASE-BORN.			TWIN BIRTHS.		
	Males.	Females.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.
January.	909	925	1,834	37	29	66	9	4	13
February	938	886	1,824	31	36	67	10	7	17
March .	984	977	1,961	50	33	83	7	7	14
April .	1,014	937	1,951	38	28	66	5	3	8
May. .	864	893	1,757	30	20	50	9	6	15
June .	856	805	1,661	30	31	61	6	5	11
July. .	790	745	1,535	23	22	45	3	4	7
August .	775	710	1,485	29	22	51	5	2	7
September	797	778	1,575	34	31	65	6	..	6
October.	863	817	1,680	33	18	51	5	2	7
November	782	845	1,627	26	31	57	2	3	5
December	842	806	1,648	32	37	69	6	5	11
Total .	10,414	10,124	20,538	393	338	731	73	48	121

The diagram, No. 1, is illustrative of this table.

In the following tables (p. 39) the whole period included in the registers is broken into four portions; the *first* comprising the 70 years, ending with 1686; and the others the three succeeding half centuries.*

In the year 1626 the plague carried off 575 persons, or rather raised the mortality to that amount, nearly a sixth probably of the whole population; and it is interesting to remark the restorative tendency, as exemplified in the increase of the births during the succeeding ten years. This was particularly exhibited in 1628, the consequence of the marriages having been about doubled immediately after the great mortality. It would seem, however, that Tavistock did not fully recover, till a recent period, from the shock of this awful visitation. It may be

* An abridgment only of these tables is inserted here; the details are contained in the volume referred to in the preceding note. It has also been necessary to omit the diagrams with which Dr. Barham had illustrated each period.

PERIODS.	Births.			Twins.	PERIODS.	Births.			Twins.
	Males.	Fem.	Total.			Males.	Fem.	Total.	
<i>1st Period.</i>					<i>3rd Period.</i>				
1617 to 1626	490	511	1,001	..	1737 to 1746	360	377	737	..
1627 1636	549	517	1,066	..	1747 1756	357	374	731	..
1637 1646	456	454	910	..	1757 1766	355	399	754	..
1647 1656	383	339	722	..	1767 1776	397	361	758	..
1657 1666	379	387	766	..	1777 1786	429	422	851	..
1667 1676	405	399	804	..					
1677 1686	446	404	850	..					
Total .	3,123	2,996	6,119	45	Total .	1,892	1,937	3,829	1
Base-born .	45	48	93	..	Base-born .	119	96	215	..
<i>2nd Period.</i>					<i>4th Period.</i>				
1687 to 1696	422	406	828	..	1787 to 1796	476	500	976	..
1697 1706	441	418	859	..	1797 1806	579	571	1,150	..
1707 1716	332	340	672	..	1807 1816	835	767	1,602	..
1717 1726	353	339	692	..	1817 1826	808	726	1,534	..
1727 1736	361	381	742	..	1827 1836	763	714	1,477	..
Total .	1,912	1,895	3,807	18	Total .	3,460	3,263	6,723	60
Base-born .	57	59	116	..	Base-born .	161	132	293	..

MONTHS.	1617 to 1686			1687 to 1736			1737 to 1786			1787 to 1836		
	Males.	Fem.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.
January .	250	269	519	168	172	340	188	178	366	303	306	609
February .	306	253	559	174	159	333	159	190	349	299	284	583
March. . .	300	307	607	176	210	386	180	179	359	328	281	609
April . . .	308	285	593	181	180	361	180	176	356	345	296	641
May . . .	281	285	566	150	152	302	162	186	348	271	270	541
June . . .	244	231	475	165	152	317	165	156	321	282	266	548
July . . .	214	190	404	154	137	291	145	147	292	277	271	548
August . .	210	215	425	140	132	272	150	141	291	275	222	497
September	226	247	473	168	140	308	135	123	258	268	263	536
October . .	276	244	520	155	155	310	137	155	292	295	263	558
November	251	246	497	137	146	283	121	169	290	244	252	496
December	255	225	480	144	160	304	170	137	307	273	284	557
Total .	3,123	2,996	6,119	1,912	1,895	3,807	1,892	1,937	3,829	3,460	3,263	6,723

worth noticing incidentally, that the excess of female baptisms, which is observable in *January*, took place entirely about this calamitous period, from 1624 to 1633; whilst the excess of males in *February* occurred chiefly from 1635 to 1655, a time of excitement, if not always of prosperity.

The coincidence of the ratios of the several months in all the periods is so close as to lead to the conclusion, that the average of the whole period nearly expresses the general law for Tavistock. The following points of difference between the periods, and in the proportions of the sexes, may, perhaps, deserve notice. The probable period of conception is also stated as an interesting object of enquiry in this branch of the subject. To arrive at this, allowance must be made for the time elaps-

ing between birth and baptism, which may be averaged at a month. We must therefore go back ten months from the date of baptism for this purpose; or, what amounts to the same, we must add two months to that date. The general result is, that the spring months are the most prolific, and those of autumn the least so; May and June being to October :: 19 : 14 (nearly). Among the base-born the same law is maintained. In the following statement of the varying results in the different periods, the calculated month of conception is placed within brackets after the month of baptism.

In January [March]—The *female* baptisms exceed the male in every period except the 3rd.

February [April]—The *male* baptisms exceed the female in every period except the 3rd. The base-born females exceed the males in every period but the 1st, and then are only one less.

March [May]—The *females* exceed the males in the 1st and 2nd periods, and are only one less in the 3rd.

April [June]—The 2nd and 3rd periods are nearly the same for males and females. In the 4th the *males* exceed by 46.

May [July]—The *females* exceed the males in every period except the 4th, in which they are only one less.

June [August]—The excess of *males* occurs in every period, and in nearly equal proportions.

July [September]—The excess of *males* occurs almost entirely in the first two periods.

August [October]—The excess of *males* occurs chiefly (53 in 497) in the last period.

September [November]—In the first period *females* exceed males. In the 2nd and 3rd *males* exceed females. In the 4th they are equal.

October [December]—In the 1st and 4th periods *males* exceed females. In the 2nd they are equal; and in the 3rd *females* exceed males.

November [January]—The *females* exceed the males in every period except the 1st, in which they are only 5 less.

December [February]—The *males* exceed the females in the 1st and 3rd periods; whilst in the 2nd and 4th *females* exceed males.

These results do not lead to the inference that the season most conducive to procreation generally is at all remarkably productive of *males*. The organic cause of fecundity may, perhaps, in this case, be surmised to differ from that which influences the proportions of the sexes in the base-born and in twin births.

It will be observed, that the 3rd period includes only *one* twin birth. It is not credible that no other twins were baptized; but it may probably be justly inferred that the number of such baptisms was small. The 2nd and 3rd periods are marked by the stationary or even declining amount of baptisms generally, and (assuming that the usual proportion between births and baptisms was maintained) it is likely that a deficiency of double births may have been a contemporaneous condition. The excess of female baptisms during the 3rd period may be adduced as an argument on the same side.

The proportion of base-born in the several periods is interesting in its bearing on the estimate of the state of society in each. In the *first period*

it was to the total baptisms (nearly) as 1 to 68 ; in the *second* 1 to 34 ; in the *third* 1 to 18 ; in the *fourth* 1 to 23. The increase of the relative number of illegitimate births simultaneously with a diminution of the total baptisms, and of the twin births and male children, and more recently the lessening ratio of the former, whilst the three latter were advancing, are facts which merit attention. The favourable relation mentioned last is progressive during the 4th period itself, and most strongly marked in the years nearest to the present. Before quitting this subject it may be worth while to observe, that the large entry of base-born affords ground for a belief that the legitimate children were then very generally baptized at Tavistock.

We may now proceed to the *Marriages*. The number registered during the whole period was 5,384, which were distributed among the several months as follows :—

MONTHS.	1617 to 1686	1687 to 1736	1737 to 1786	1787 to 1836	Whole Term, 1617 to 1836.
January . .	154	72	75	109	410
February . .	99	93	95	118	405
March . . .	31	48	88	205	372
April . . .	165	92	136	149	542
May	163	91	118	153	525
June	129	75	103	130	537
July	111	66	93	123	393
August . . .	84	58	123	139	404
September .	133	58	94	130	415
October . .	142	86	100	144	472
November .	190	85	108	147	530
December .	71	111	126	171	479
Total . . .	1,472	935	1,259	1,718	5,384
Annual Mean	21.33	18.7	25.18	34.36	..

The proportionate marriages in the different *seasons* were as follows :—

Spring, or March, April, May 1,439 = 26.7 per cent.

Summer, or June, July, August 1,234 = 22.9 „

Autumn, or September, October, November 1,417 = 26.3 „

Winter, or December, January, February . 1,294 = 24.1 „

The relatively small number of marriages in March in the earlier periods is accounted for by the continuance of the Roman Catholic objection to the solemnising of matrimony during Lent. This seems to have been gradually worn out, and we see during the last period that many more were married in March than in any other month. The total for April appears to be raised above that of the other months in consequence of Easter having been the first opportunity offered to the parties for the performance of the ceremony, to which the season of Lent was considered less appropriate. The spring quarter affords on the whole sufficient evidence that it was usually held in that esteem which proverbs have assigned to it for this festive occasion. On the other hand, some curious speculation might be entertained as to the motives which produced so many unions in the three concluding months

of the year. If we take the period of ten months after marriage as a probable average for the birth of the first-born children, the months of greatest and of least fecundity, as shown by the tables of baptisms, will be found to bear a due relation to the date of marriage.

The proportion of baptisms (the base-born being deducted) to each marriage, was,

In the first period	(1617 to 1686)	4.09
„ second „	(1687 1736)	3.94
„ third „	(1737 1786)	2.97
„ fourth „	(1787 1836)	3.73
„ whole term	(1617 1836)	3.68

Modern statisticians have calculated that, for recent times, 24 per cent. must be added to the number registered as baptized, in order to arrive at a just estimate of the total number of births. This calculation of course includes the base-born. It is probable that, in the case under consideration, owing to dissent being less prevalent and to other causes, baptism in the church was more general in the first than in either of the later periods; and perhaps it has been least general in the last of all. The falling off in the productiveness of marriage in the *third* period coincides with the other facts above noticed in evidence of the then declining condition of social and moral interests at Tavistock.

It should be here stated, that in calculating the monthly proportions of baptisms and marriages no allowance has been made for the different length of the several months.

REGISTER OF BURIALS.

In proceeding to the consideration of the Burials, it is right to mention that a small number of bodies have been interred from time to time in the ground occupied by the Presbyterian sect, and probably a few others elsewhere, as connected with Dissenters. A public cemetery was opened at Tavistock on the 30th April 1834. The interments in this, up to October 1837, were 65, of which 36 were males, and 29 females.

The total number of burials entered on the parish registers, from 1615 to 1836 (excluding the soldiers and prisoners interred during the civil wars in the reign of Charles I.), is 20,759. These are distributed over the several months as follows:—

MONTHS.	Total No. in each Month.	Per-centage Proportion in each Month.	Total No. in each Quarter.	Per-centage Proportion in each Quarter.	MONTHS.	Total No. in each Month.	Per-centage Proportion in each Month.	Total No. in each Quarter.	Per-centage Proportion in each Quarter.
March .	1,944	9.37	5.694	27.4	Sept. .	1,582	7.62	4.703	22.7
April .	1,841	8.87			Oct. .	1,538	7.41		
May .	1,909	9.21			Nov. .	1,583	7.63		
June .	1,730	8.34	4.954	23.9	Dec. .	1,750	8.43	5.408	26.
July .	1,619	7.80			Jan. .	1,857	8.91		
August	1,605	7.74			Feb. .	1,801	8.68		

A juster estimate of the ordinary mortality in the several months may be formed if two years of great mortality be altogether omitted from the calculation, *viz.*, 1626, in which the plague occurred, and the burials

amounted to 575; and 1644, during the civil wars, in which year, exclusive of 114 soldiers and prisoners interred, the burials were 275. The mortality of the several months will then be as follows:—

March . 1,877	} 5,560 = 28.1 per cent.	Sept. . 1,343	} 4,289 = 21.7 per cent.
April . 1,807		Oct. . 1,410	
May . 1,876		Nov. . 1,531	
June . 1,688		Dec. . 1,727	
July . 1,542	} 4,703 = 23.7 per cent.	Jan. . 1,793	} 5,243 = 26.5 per cent.
August 1,473		Feb. . 1,723	

Dividing the whole period, as in the baptisms and marriages, into four sections, the results are these:—

MONTHS.	1615 to 1686	1687 to 1736	1737 to 1786	1787 to 1836	MONTHS.	1615 to 1686	1687 to 1736	1737 to 1786	1787 to 1836
March	655	404	419	480	Sept. .	598	316	324	344
April .	615	414	365	447	Oct. .	525	322	324	367
May .	643	367	436	463	Nov. .	509	306	326	442
June .	618	347	386	395	Dec. .	534	378	363	475
July .	551	339	332	393	Jan. .	568	397	415	467
August	610	373	296	326	Feb. .	606	399	344	442

The mean number of burials per annum is as follows:—

During 72 years, 1615 to 1686	97.6*	During 50 years, 1737 to 1786	86.6
,, 50 ,, 1687 1736	87.2	,, 50 ,, 1787 1836	100.8

If we equalize the different months, deducting in due proportion from those which have 31 days and adding to the others, and take in each period the average number of burials in ten years, the proportionate mortalities in the different periods for the several months and seasons will be (nearly) as follows:—

MONTHS.	1615 to 1686	1687 to 1736	1737 to 1786	1787 to 1836	Quarterly Average of the whole Period.	Per- centage Proportion.
March . .	91	78	83	93	} 253	27.0
April . .	89	84	75	91		
May . .	90	72	76	91		
June . .	89	70.5	78.5	80.5	} 222	23.7
July . .	79	66.5	65.5	77.5		
August .	86	74	58.5	64.5		
September	87	65	66	70	} 214	22.8
October .	74	63.5	64	72.5		
November.	74	62.5	66.5	90		
December .	75	73	71.5	94	} 248	26.5
January .	79	77	80.5	90.5		
February .	92	85	74	94.5		

These results are nearly represented by the diagram No. 2.

We may remark, on inspecting the causes of mortality drawn on this diagram, that those which represent the first two periods have a more irregular shape, although the range of their curvature is not so great as in the other two; their lowest points occur in the months of October,

* If we deduct the two years of great mortality, 1626 and 1644, amounting together to 810 burials, the average of the remaining 70 years, to 1686, is 88.3.

November, December, and January, and they make another dip in July. The latter two periods, though the first of these presents some irregularities in the spring, yet nearly approach each other; the autumn being decidedly the most healthy season, or that in which fewest burials took place, and the spring the least healthy. The last period has by far the most regular form, exhibiting an almost uniform mortality from November to May (both inclusive), and a regular decrease thence to August, when it reaches its lowest point, and an equally regular increase from August to November. There can be little doubt that the usual average of the seasons at Tavistock is nearly represented by this last line; the deviations from it in the former periods being chiefly produced by the occurrence of fatal epidemic and pestilential diseases, the attacks of which principally took place in the spring and autumn. This has been shewn in the general estimate exhibited before, at page 43, in which, by the omission of only two particularly fatal years, in one of which (1626) a mortality of 331 occurred in the months of August, September and October, and in the other (1644) 145 burials took place in September and October, the proportions of burials in the several months come to correspond very closely with those found to prevail during the 50 years, ending with 1836.

The periods of the occurrence of less marked instances of an amount of burials distinctly above the usual average deviate less strikingly from the regular proportions of the different months. They are here recorded, and compared with the average of several preceding and following years.

In December	1627	there were 20 burials, the average being	7
June	1628	,, 17	7
July, August, September . .	1636	,, 58	7
July	1639	,, 19	7
March, May, June	1643	,, 74	7
November	1659	,, 22	7
February, March, April . .	1674	,, 53	8
January, February, March, April	1690	,, 114	9
August	1694	,, 21	8
December	1730	,, 22	7
January, February	1731	,, 41	7
April	1735	,, 21	8
January, February, March . .	1740	,, 72	8
September, October, November	1742	,, 53	7
January	1755	,, 22	8
June, September	1756	,, 42	8
September, October, November	1766	,, 59	6
September	1778	,, 20	7
January	1810	,, 19	7
October, November	1814	,, 46	9
June, July	1824	,, 42	9
March	1825	,, 20	10
November, December . . .	1825	,, 54	9
February, March	1829	,, 55	8
June, July	1830	,, 49	9

Thus, in 47 months of remarkable mortality,—

January occurred 6 times, and the burials amounted to	143
February ,, 5	122
March ,, 6	133
April ,, 3	60
May ,, 1	23

June	occurred	4 times, and the burials amounted to	92
July	,,	4	84
August	,,	2	46
September	,,	5	95
October	,,	3	64
November	,,	5	106
December	,,	3	68

If, then, we deduct the extraordinary mortality which occurred in each month from the total mortality of each throughout the whole period of 220 years, after making the necessary allowances for their unequal length, we shall arrive at the following results:—

MONTHS.	Deaths, after equalization of Months.	Deaths, after deducting extraordinary Mortality.	Per-centage Proportion.	MONTHS.	Deaths, after equalization of Months.	Deaths, after deducting extraordinary Mortality.	Per-centage Proportion.
March	1,815	1,790	} 28.4	Sept .	1,372	1,300	} 21.7
April .	1,840	1,770		Oct. .	1,392	1,370	
May .	1,843	1,860		Nov. .	1,549	1,470	
June .	1,714	1,628		Dec. .	1,709	1,685	
July .	1,516	1,425	} 23.6	Jan. .	1,733	1,693	} 26.3
August	1,448	1,445		Feb. .	1,845	1,635	

The proportions resulting from these figures might be presumed to indicate a near approximation to the relative mortality of the several months at Tavistock, *independently* of those fluctuations which arise from epidemic diseases; but it will be seen, by comparing the quarterly per-centage proportions with those in the first table at p. 43, how closely they agree with those in which no deduction has been made for epidemics of an ordinary nature.

The population of the borough and parish of Tavistock was, as before stated, 3,117 in 1781. By the census of 1831 it was 5,602; the burials registered from the beginning of 1781 to the end of 1830 were 4,822, the baptisms registered during the same period were 6,382. This excess of births would, supposing emigration to have been equalled by immigration, have raised the population in 1831 to 4,677. If we suppose $14\frac{1}{2}$ per cent. of the children born not to have been registered, we shall more than account for the remaining 925. The marked excess of baptisms over burials commenced in 1786, and increased progressively afterwards, *viz.*—

Baptisms, 976, 1150, 1603, 1534, 1477 = 6740
Burials . 795, 926, 1027, 1104, 1191 = 5043

Prior to this date the decennial baptisms and burials were as follows:—

From 1737 to 1786, Baptisms, 737, 731, 754, 758, 853 = 3,833
,, ,, Burials . 998, 883, 931, 713, 829 = 4,354

In the last 20 years of this period some improvement may be noticed.

The numbers in the preceding 50 years, from 1687 to 1736, were—

Baptisms, 828, 859, 672, 692, 742 = 3,793
Burials . 978, 782, 870, 857, 873 = 4,360

The ratios remain as in the former period; but it must be observed,

that the absolute number of baptisms was much greater in the first 20 years.

In the 70 years, from 1617 to 1686, the baptisms and burials for each successive period of ten years were,—

Baptisms, 1001, 1066, 910, 722, 766, 804, 849 = 6118

Burials . 1371, 761, 1163, 723, 974, 960, 912 = 6864

The absolute number of baptisms at the commencement of this period appears to indicate very clearly a population larger than that of 1780. The plague in 1626 raised the mortality to 575, and twenty years later the burials were nearly half that number (275). From this latter stroke the same rally does not seem to have taken place which occurred in the former instance; on the contrary, the population, in all probability, experienced a still further defalcation till nearly the close of the succeeding century.

The age of the buried was first registered in December, 1800. The following information, upon this point, relates to those who have been buried since that date:—

AGES.	Males.	Fem.	Total.	AGES.	Males.	Fem.	Total.
1 year and under .	617	516	1,133	60 to 70 .	176	178	354
1 to 5 (inclusive)	306	323	629	70 75 .	89	86	175
5 10 . . .	89	71	160	75 80 .	86	102	188
10 15 . . .	33	44	77	80 85 .	45	73	118
15 20 . . .	37	52	89	85 90 .	21	35	56
20 30 . . .	104	102	206	90 95 .	6	12	18
30 40 . . .	106	107	213	Above 95 .	2	7	9
40 50 . . .	112	97	209				
50 60 . . .	147	137	284				
				Total .	1,976	1,942	3,918

The ages of the individuals who died beyond the age of 95, were—of the males, 96 and 99. Of the females, 2 at 96; 1 at 97, 98, and 101; and 2 at 102.

We may remark in the foregoing table, a confirmation of the observation repeatedly made, that the mortality in early infancy is more remarkable in the male than in the female children. Thus, the total number of interments being nearly equal,—*viz.*, :: 197 : 194 for the two sexes; the burials of males are to those of females, in the first year, :: 6 : 5. On the other hand, the burials of females, from 10 to 20, are to those of males :: 9.6 : 7, and from 75 upwards :: 23 : 16. In other terms, whilst the male burials exceed the female, in the 1st year, by 101, the females, from 10 to 20 and above 75, exceed the males by 95. As to absolute longevity it is worthy of notice, that only 2 males exceeded 95, whilst 7 females did so; and that the average age of the former was but $97\frac{1}{2}$, whilst that of the women was nearly 99 ($98\frac{6}{7}$). The burials in the first year are more than two-sevenths of the whole; and those within five years are more than four-ninths of the whole. The other age of chief mortality is from 50 to 70, in which period nearly one-sixth of the total burials occur.

In the following table, the ages of those buried in each month are stated, and the sexes are also distinguished:—

AGES.	MALES.											
	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Under 2 years	50	60	70	50	57	47	46	35	47	47	50	58
2 to 5	24	30	21	24	21	20	22	16	19	28	31	50
5 10	8	11	4	5	7	8	5	9	4	7	14	7
10 15	..	2	6	1	..	4	7	1	5	1	4	2
15 20	1	2	4	2	4	3	..	4	3	4	4	6
20 30	9	10	15	9	10	10	7	8	9	6	7	4
30 40	10	10	8	6	9	9	6	10	9	14	9	6
40 50	14	11	13	13	12	8	8	6	9	8	4	6
50 60	14	11	10	14	19	7	14	6	11	8	16	17
60 70	13	16	23	13	17	16	19	8	11	11	13	16
70 75	15	9	8	8	11	11	5	9	3	4	2	4
75 80	11	4	10	11	7	6	5	6	4	6	9	7
80 85	8	8	..	1	3	3	3	3	2	3	5	6
85 90	4	..	..	3	1	1	1	4	1	1	2	3
90 95	1	..	1	..	..	1	1	..	1	..	1	..
Above 95	2	..	..	..	..	..	..	..	..	..	..	..
Total . .	184	184	193	160	178	154	149	125	138	148	171	192
	FEMALES.											
	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Under 2 years	36	39	52	59	50	37	47	39	31	32	46	48
2 to 5	33	29	27	29	17	29	30	13	20	26	44	26
5 10	4	5	6	4	9	5	4	6	9	5	7	7
10 15	3	6	4	3	2	4	3	7	1	5	3	3
15 20	5	5	4	3	3	3	6	4	3	4	8	4
20 30	13	5	11	5	5	12	10	6	7	10	7	11
30 40	5	11	12	7	8	7	10	14	7	8	7	11
40 50	4	9	15	6	9	13	4	6	7	3	7	14
50 60	16	6	10	13	21	11	9	7	7	11	10	16
60 70	17	17	19	14	24	11	15	11	9	12	15	14
70 75	12	10	10	10	6	7	5	5	3	6	6	6
75 80	12	15	10	13	9	1	9	3	7	8	4	11
80 85	9	11	9	4	4	7	6	2	4	2	6	9
85 90	3	4	4	3	4	2	1	5	3	4	..	2
90 95	..	..	1	1	2	..	..	1	3	1	1	2
Above 95	1	1	1	..	1	..	..	..	..	2	1	..
Total . .	173	173	195	174	174	149	159	129	121	139	172	184
	TOTAL.											
	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Under 2 years	86	99	122	109	107	84	93	74	78	79	96	106
2 to 5	57	59	48	53	38	49	52	29	39	54	75	76
5 10	12	16	10	9	16	13	9	15	13	12	21	14
10 15	3	8	10	4	2	8	10	8	6	6	7	5
15 20	6	7	8	5	7	6	6	8	6	8	12	10
20 30	22	15	26	14	15	22	17	14	16	16	14	15
30 40	15	21	20	13	17	16	16	24	16	22	16	17
40 50	18	20	28	19	21	21	12	12	16	11	11	20
50 60	30	17	20	27	40	18	23	13	18	19	26	33
60 70	30	33	42	27	41	27	34	19	20	23	28	30
70 75	27	19	18	18	17	18	10	14	6	10	8	10
75 80	23	19	20	24	16	7	14	9	11	14	13	18
80 85	17	19	9	5	7	10	9	5	6	5	11	15
85 90	7	4	4	6	5	3	2	9	4	5	2	5
90 95	1	..	2	1	2	1	1	1	4	1	2	2
Above 95	3	1	1	..	1	..	..	..	..	2	1	..
Total . .	357	357	388	334	352	303	308	254	259	287	343	376

It appears from the preceding table, that, of the burials under two years, 382 males and 284 females were buried in the seven months, from September to March; whilst in the other five months 235 males and 232 females were interred; so that almost the whole excess of male burials was produced in the colder months. From 1 to 5, the burials of the sexes were nearly equal for the first series of months; whilst for the second, there were buried 103 males and 118 females. The total interments for the former months are, 1,210 males and 1,157 females, or 53 more males than females; whilst in the five warmer months, the numbers were 766 males and 785 females, or 19 more females than males.

The ratios of the burials, at certain early and advanced ages, to the total burials at all ages, in each month respectively, are these, the burials at the particular age stated being 1.

MONTHS.	AGES.				
	Under 2 Years.	2 to 5 (inclusive).	60 to 70.	70 to 80.	From 80 upwards.
	one to	one to	one to	one to	one to
January . . .	4.	6.1	11.6	6.94	12.4
February . . .	3.6	6.	10.8	9.42	14.9
March . . .	3.2	8.1	9.2	10.2	24.3
April . . .	3.	6.3	12.4	8.	27.8
May . . .	3.3	9.3	8.6	10.7	23.5
June . . .	3.6	6.2	11.2	12.	21.14
July . . .	3.5	6.	9.	12.84	25.66
August . . .	3.4	8.8	13.4	11.	17.
September . .	3.5	7.	13.75	16.2	19.6
October . . .	3.54	5.3	12.5	12.	22.
November . .	3.57	4.57	12.25	16.3	21.4
December . .	3.36	4.7	11.9	12.7	16.2

It appears from this table, that the ratio of mortality of infants has not, at Tavistock, been at all higher in the colder months. On the contrary, January, the coldest month of the year, has the smallest proportion of burials at one year and under; and the ratio of infantile to the total mortality, during the six months from October to March, is :: 1 : 3.54, whilst in the other six months it is :: 1 : 3.38. In the period from 1 to 5, October, November, and December have far the highest proportionate mortality, being :: 1 : 4.85; while for the other nine months it is :: 1 : 7.1. In the period from 60 to 70, no remarkable influence of season is indicated. The five months, from August to the end of the year, are those in which fewest burials took place. From 70 to 80, the first four months of the year are those of greatest proportionate mortality, the ratio being :: 1 : 8.64, while for the rest of the year it is :: 1 : 12.96. Above 80, the cold months, December, January, and February, have the proportion of burials :: 1 : 14.5, while the others stand :: 1 : 22.49; the month of January is, in the two last periods, that of decidedly greatest mortality; and that of August is much above the rate of the preceding and following months.

The ratios of the burials in each month, at the same ages as those

specified in the last table, to the total burials at the same ages, are as follows (nearly) :—

MONTHS.	AGES.				
	Under 2 Years.	2 to 5 (inclusive).	60 to 70.	70 to 80.	From 80 upwards.
January. . .	one to 13·17	one to 11·	one to 11·8	one to 7·26	one to 7·18
February . .	11·44	10·66	10·8	9·55	8·37
March . . .	9·29	13·1	8·4	9·55	12·56
April . . .	10·4	11·84	13·1	8·64	16·75
May . . .	10·6	16·55	8·63	11·	13·4
June . . .	13·5	12·83	13·1	14·52	14·36
July . . .	12·2	12·1	10·4	15·1	16·75
August . . .	15·31	21·7	18·6	15·8	13·
September . .	14·53	16·1	17·7	21·35	14·36
October . .	14·34	11·65	15·4	15·1	15·46
November . .	11·8	8·38	12·64	17·3	12·56
December . .	10·7	8·27	11·8	13·	9·12

The burials at all ages, during these years, were in each month in the following proportions (nearly) :—

MONTHS.		Or as 1 to	MONTHS.		Or as 1 to
January. . .	3·5	10·97	July. . . .	3·1	12·7
February . .	3·5	10·97	August . . .	2·5	15·42
March . . .	3·9	10·1	September . .	2·6	15·12
April . . .	3·3	11·7	October . . .	2·9	13·65
May. . . .	3·5	11·13	November . .	3·4	11·42
June . . .	3·0	12·93	December . .	3·8	10·42

These tables lead to the same inferences as those last considered ; the infant mortality in the colder months bearing, to that in the warmer ones, a less proportion than that which the mortality, at all ages in the former months, bears to the mortality in the latter, with the single exception of the month of March. In the period from 1 to 5, the same remark applies, without any exception, to the earlier months of the year ; but in the concluding months, the mortality is considerably above the average for all ages. From 70 to 80, the first months of the year exhibit a very notable excess of mortality, whilst the latter months of the year are a good deal below the average for all ages. Beyond 80, the mortality of the three cold months, January, February, and December, is very distinctly marked, whether as compared with that at the same age in other months, or with the average, for all ages, during the same months.

The writer has thought it best to abstain from all comparison of his deductions, with those which have been, or might be, drawn from other data, as the collection of materials, and the establishment of such special conclusions, as may merely express the *resumé* of these materials, appear to him to be the present duty of Statistical inquirers.

Report on the State of Superior General Education in Paris. Prepared by an English resident in that Metropolis, at the request of JAMES HEYWOOD, Esq., F.S.S.

BEFORE the Revolution of 1790, the University of Paris comprised 10 great and 26 minor colleges; for all of which the existence of the Faculties of Divinity, Civil and Canon Law, Medicine and Arts, was fully recognized. The Professors appear to have been all Professors of Colleges, rather than of the University, as an abstract body; and the number of students that inhabited the colleges, and followed the regular courses of lectures, was considerable. The bursarships were numerous, though never of any high value; and in general the salaries of the public officers were sufficient, although by no means superfluous. One of the main sources of income to the University was a certain twenty-eighth part of the general rent paid by the Farmer-General of the Royal Posts and Messageries, which, even as long ago as 1719, amounted to 3,400,000 livres, of which the twenty-eighth part was 121,428 livres. This income had, however, been considerably augmented towards the close of the last century; and, joined to the fees paid by students, constituted the colleges (which also enjoyed their private estates) as rich and powerful bodies.

The extensive buildings that even yet remain, testify the importance which once attached to those learned institutions; and the literary history of France bears ample testimony to the efficient manner in which the functionaries discharged their duties. The University of Paris was, at all periods of its existence, a powerful political body; and its position, with regard to the State and the Church, was always one of considerable dignity.

Independent of the University, but with supreme control in matters of theology, was the Sorbonne, a college of ecclesiastical professors, which was looked up to as the head and leader of the whole. The Collège de France also formed an independent body; and several religious houses, founded in Paris by abbies of their respective orders in various parts of France, served as succursal colleges for the reception of monks who wished to proceed to the capital for the benefit of university education, and for the acquisition of university degrees, while they still observed the rules of monastic discipline. Such was the great college of the Bernardins, founded by an Englishman, Stephen of Lexington, about 1244; and the Collège des Anglais, a succursal house to the great college at Douai, which was founded in the 17th century.

The history of this University, once the most celebrated in Europe, has been treated at full length by Bulœus* and Crevier in their well known works. The system of education was not such as would now be called enlightened; and the discipline maintained was slightly tinged with monastic rigour. At that time no religion was tolerated in France except the Catholic; and therefore all who were admitted to degrees were understood to be of the same religious persuasion.

At the Revolution all the colleges were abolished, their estates were all confiscated, and the whole institution was entirely re-modelled. Under the empire of Napoleon further alterations were made in the system; and after the Restoration of the Bourbons, another extensive modifica-

* Du Boulay.

tion of the names, if not of the spirit, of the altered institutions was effected. The constitution of the Academy of Paris (for the name of University had been dropped) was then fixed upon nearly its present basis, and public education in France was thenceforward reduced to one uniform system.

According to the new scheme, all the universities of the kingdom were abolished ; and, by misapprehension of the original signification of the term, the name of University was affixed to an ideal body, comprising all the institutions for public instruction throughout the country. This was placed under the superintending control of the Minister of Public Instruction, who therefore assumed the title of "Grand Master of the University," and who was assisted by a certain number of advisers, forming the Royal Council of Public Instruction. In the capital several faculties were established, as also at some of the chief cities of France, such as Strasburg, Montpellier, Caen, &c.; while in all the principal towns, colleges, either royal or communal, were founded, and placed under the administrative control of an academy. The Academy had its seat at the town where the faculties just mentioned were established, and was composed of the professors of those faculties, under the chief direction of the Minister of Public Instruction ; since that period several new faculties have been established, with the most beneficial effects, in some of the great commercial cities, such as Bordeaux and Lyons : and the law now requires all boarding schools, called "Institutions" and "Pensions," not only to be directed by regularly-graduated masters, but also to be conducted, as regards the mode of education, in conformity to the dictates of the Academy, within the circumscription of which they may chance to be.*

As part of this plan, the Academy of Paris consists at present of a Rector, who is always the Minister of Public Instruction ; of an Inspector-General of Studies ; a body of Inspectors, generally six in number ; and an Academic Council, under the Rector as President. It comprises separate faculties of theology, of law, of medicine, of sciences, and of letters ; there are dependent upon it, in Paris, five royal and two private colleges, besides the Royal College of Versailles, which is considered a member of the same body ; and all the "institutions" and "pensions" (or schools of all kinds) within the limits of the Academy are subject to its jurisdiction. All the above colleges are, as it is termed, *de plein exercice* ; that is, the whole curriculum of the Academy is taught in them :—comprising religion, ancient and modern languages, belles lettres, philosophy, mathematics, physics, chemistry, natural history, history, geography, writing, drawing, and other arts. Three of the Royal Colleges admit students within their walls, as boarders, and the other two receive only daily pupils ; the Royal College of Versailles, and the two private colleges of Paris, receive boarders. As the age of some of the students does not exceed seven or eight years, these colleges are in fact nothing but public schools, and the pupils or students are treated entirely upon the ordinary system of school discipline.

The pupils of the colleges may proceed to graduate in letters, after finishing the usual academic course of study, and on passing the requisite examinations, but a residence at a college is not strictly necessary for

* This regulation is about to be abolished by the legislature.

this purpose; and any one presenting the requisite certificates, which will be hereafter specified, is allowed to enter the examination for the degree of bachelor of letters, and to graduate accordingly. No person can be admitted into the faculties of sciences, law, medicine, or divinity, without having previously taken the degree of bachelor of letters. The lectures, however, of the public professors in those faculties are not only entirely gratuitous, but are open to everybody, whether regular students or not; an attendance, however, on those lectures does not count towards graduation, unless the student, before commencing them, fulfils all the conditions required by the Academy.

Of the Institutions, Pensions, &c., for both Sexes, in the Department of the Seine (Paris and the Banlieue).

The number of *institutions*, in Paris, for boys, is 28; of *pensions* for boys, 93. In the rest of the Department of the Seine there are 3 *institutions* for boys, and 39 *pensions*. The number of *institutions*, in Paris, for girls is 22; of *pensions*, 48. In the rest of the Department of the Seine the number of *institutions* for girls is 2, and of *pensions* 13. The *institutions* are establishments on a larger scale, where higher and more general studies are pursued than in a *pension*; but the internal management is in both instances much the same, being that of schools in the common acceptation of the term. All masters of institutions must be graduates of the faculty of letters, at least; and all masters of pensions must have passed a satisfactory examination before they can obtain the requisite permission to hold a house of the kind. In the same way all mistresses of institutions and pensions are obliged to pass an examination before properly-authorized persons appointed by the Academy. These examinations are very comprehensive, and are strictly enforced. The small number of such establishments, when the population of the Capital and the Banlieue (upwards of a million), is taken into consideration, is rather surprising. Besides these there are only primary schools, and what are termed in England Dame schools, or *salles d'asile* (infant schools). All masters of institutions and pensions within the walls of Paris are bound by law, not only to follow a course of study prescribed by the Academy, but also to send their pupils daily to one of the Royal Colleges, in order to attend the courses of lectures delivered there. The professor gives the subject of a lesson to his class, which the pupils study on returning home to their institution or pension, and which they bring fully prepared to the professor by the next time of lecture. It is the duty of the masters and ushers to see that the boys exert themselves properly to this effect, and they go over the lesson with them at home previously to its being brought into the public class-room of the college. The general effect of this regulation is found to be good. The boys have other lessons given them at home; but in all other respects they are considered as out-pupils of the college which they attend.

There are no colleges for girls, and their education is strictly confined to the system followed in each particular establishment.

It should be observed, that the law by which this regulation of collegiate attendance is enforced in boys' schools, is about to be greatly modified, if not totally repealed; and the effect which this change will have upon the institutions, &c., cannot but be considerable.

It may be added, that it is the custom in most large institutions and pensions, which are attended by many day-pupils from various parts of Paris, to keep omnibuses for the purpose of conveying the scholars to and from their residences in the morning and evening.

There are very few institutions in which the number of boarders exceeds 200.

Of the Colleges of Paris.

The internal system of the colleges is nearly the same as that of the institutions, except that a stricter discipline is kept up in the former, and that in general the under-masters are of a superior order. The studies are the same. In the colleges all the pupils, and in the institutions and pensions those who permanently attend the college lectures, wear a blue uniform jacket, with a plain upright collar and brass buttons, blue trowsers in winter, and white in summer, and a round hat. In institutions and pensions the pupils are summoned to their different duties by sound of a bell, but in the colleges by beat of drum. The following is an enumeration of the various professors and other officers in the several colleges:—

I.—*Collège Louis le Grand, No. 123, Rue St. Jacques.*

Provisor or Provost.	Two Professors of the Fourth Class.
Censor of Studies.	— Fifth ditto.
Deputy Censor.	— Sixth ditto.
Almoner.	Professor of Natural History.
Assistant ditto. } Catholic.	Three Assistant Professors.
Protestant Minister.	Professor of English.
Steward.	— German.
Professor of Philosophy.	Three Surveillants Généraux.
Two Professors of Physics.	Five Elementary Masters.
Four Professors of Special and Elementary Mathematics.	Masters (number not limited) of Drawing, Writing, Music, and Gymnastics.
Two Professors of Rhetoric.	Twenty-four Maîtres d'études (Ushers)
Professor of French Literature.	Two Physicians.
Three Professors of History and Geography.	Surgeon.
Two Professors of the Second Class.	Dentist.
— Third ditto.	Druggist.
	Treasurer.

There is a royal school of Oriental languages annexed to this college, consisting of an administrator and four professors.

The usual number of boarders in this college is above 500, and of out-door pupils the number is the same.

II.—*Collège Royal de Henry IV., in the Abbey of St. Geneviève.*

Provisor or Provost.	Two Professors of the Fourth Class.
Censor.	— Fifth ditto.
Almoner.	— Sixth ditto.
Assistant ditto. } Catholic.	Two Professors of Natural History.
Steward.	Four Elementary Masters.
Professor of Philosophy.	Supplementary Professor of Rhetoric.
— Physical Sciences.	— Mathematics.
— Special Mathematics.	Three Surveillants Généraux.
— Elementary ditto.	Professor of English.
Two Assistant Professors of ditto.	— German.
Professor of Rhetoric.	Masters for Drawing, Writing, and Gymnastics.
Assistant ditto.	Fifteen Maîtres d'études (Ushers).
Three Professors of History.	Four Supernumerary ditto.
Two Professors of the Second Class.	Four Physicians.
— Third ditto.	

Consulting Surgeon.
Dentist.
Druggist.

Surveillant of the Infirmary.
Treasurer.

The number of boarders in the college is about 450, and of out-door pupils 300.

III.—*Collège Royal de St. Louis, Rue La Harpe.*

Provisor or Provost.
Censor of Studies.
Steward.
Almoner.
Assistant ditto.
Professor of Philosophy.
Two Professors of Physics.
Professor of Special Mathematics.
Assistant ditto.
Three Professors of Elementary ditto.
Professor of Preparatory ditto.
Two Professors of French Literature.
—— Rhetoric.
Three Professors of History.
Assistant ditto.
Two Professors of the Second Class.
—— Third ditto.
—— Fourth ditto.

Two Professors of the Fifth Class.
—— Sixth ditto.
Professor of Natural History.
Assistant ditto.
Five Elementary Masters.
Professor of English.
—— German.
Two Surveillants Généraux.
Thirteen Maîtres d'études (Ushers).
Maître Surveillant of the Infirmary.
Six Supernumerary Masters.
Masters of Writing, Drawing, and Music.
Physician.
Consulting ditto.
Surgeon.
Consulting ditto.
Dentist.

The number of boarders commonly received in this college is 350, and of out-door pupils 700.

IV.—*Collège Royal de Charlemagne, Rue St. Antoine.*

Provost.
Censor of Studies.
Steward.
Professor of Philosophy.
—— Physics.
—— Special Mathematics.
—— Elementary ditto.
Two Assistant ditto.
Two Professors of Rhetoric.
Three Professors of History.
Assistant ditto.
Two Professors of the Second Class.

Two Professors of the Third Class.
—— Fourth ditto.
—— Fifth ditto.
—— Sixth ditto.
—— Elementary Classes.
—— Natural History.
Professor of Cosmography.
—— English.
—— German.
Physician.
Consulting Surgeon.
Oculist.

There are no boarders received in this college, and the number of out-door pupils is about 800.

V.—*Collège Royal de Bourbon.*

Provisor or Provost.
Censor of Studies.
Steward.
Professor of Philosophy.
—— Physics.
—— Special Mathematics.
—— Elementary ditto.
Assistant ditto.
Four Professors of Rhetoric.
—— History and Geography.
Two Professors of the Second Class.

Two Professors of the Third Class.
—— Fourth ditto.
—— Fifth ditto.
—— Sixth ditto.
—— Elementary Classes.
—— Natural History.
Two Supplementary Professors.
Professor of English.
—— German.
Two Physicians.

This college does not receive any boarders; the number of its out-door pupils is about 850.

VI.—*Collège Stanislas, No. 34, Rue Notre Dame des Champs.*

Director.		Professor of the Third Class.
Prefect of Studies.	All these Officers are Catholic Clergymen.	— Fourth ditto.
Director of the Small College.		— Fifth ditto.
— Middle College.		— Sixth ditto.
Steward.		— Natural History.
Professor of Philosophy.		Three Professors of Elementary Classes.
— Mathematics and Physics.		Masters of English, German, Italian, Music, and Drawing.
— Mathematics.		Physician.
Two Professors of Rhetoric.		Surgeon.
— History.		Dentist.
Professor of the Second Class.		

This college receives about 300 boarders, but no out-door pupils.

VII.—*Collège Rollin.*

Director.	Professor of the Fifth Class.
Prefect-General of Studies.	— Sixth Class.
Prefect of the Middle College.	— Natural History.
— Small College.	Supplementary Professor of Rhetoric.
First Almoner.	Assistant Professor of Grammar Classes.
Second ditto.	Preparer of the Physical Class.
Procurator-Administrator.	Four Divisionary Masters.
Professor of Philosophy.	Five Elementary ditto.
— Physics.	Professor of English.
— Special Mathematics.	— German.
— Elementary Mathematics.	Two Sub-Prefects of Studies.
Two Professors of Rhetoric.	Fourteen Maîtres d'études (Ushers).
Professor of History.	Two Supplementary Masters.
— the Second Class.	Masters of Drawing.
— Third ditto.	Physician.
— Fourth ditto.	Dentist.

This college admits 400 boarders, but has no out-door pupils.

All these colleges have a certain number of bursarships attached to them, for the support of deserving pupils. The charges paid for boarders are fixed upon a moderate scale, and vary from 40*l.* to 60*l.* a-year.

The following is the official return of the number of pupils in the above colleges for 1840-41 :—

Collège Louis Le Grand.—Total 1,076: viz., Boursiers Royaux 27; Boursiers Communaux 35; Pensionnaires libres 451; Externes libres 119; Externes des Institutions et Pensions 444.

Collège Henri IV.—Total 820: viz., Boursiers Royaux 48; Boursiers Communaux 37; Pensionnaires libres 404; Demi-pensionnaires 4; Externes libres 90; Externes des Institutions et Pensions 237.

Collège St. Louis.—Total 881: viz., Boursiers Royaux 48; Boursiers Communaux 43; Pensionnaires libres 213; Demi-pensionnaire 1; Externes libres 145; Externes des Institutions et Pensions 431.

Collège Charlemagne.—Total 793: viz., Externes libres 72; Externes des Institutions et Pensions 726.

Collège Bourbon.—Total 980: viz., Externes libres 250; Externes des Institutions et Pensions 730.

Collège Stanislas.—Total 275: viz., Boursiers Communaux 30; Pensionnaires libres 109; Demi-pensionnaires 2; Externes libres 30; Externes des Pensions 14.

Collège Rollin.—Total 389: viz., Boursiers Communaux 47; Pensionnaires libres 342.

General Total 5,219. Increase since last year 103.

At the end of each academical year, in the month of August, a grand distribution of prizes takes place in the public hall of the Sorbonne, to those pupils of the Royal and Communal Colleges of Paris, and of the Royal College of Versailles, who have been judged worthy of that dis-

inction by their professors during the past year. The competition, in exercises of all kinds, takes place between the pupils of all the colleges indiscriminately, their work being submitted to the inspection of a board of examiners appointed for that special purpose by the Royal Council of Public Instruction. The pupils have their names classed by order of merit; and the degree of emulation thus excited among nearly 6,000 pupils is immense. The ceremony is conducted with much pomp: the Minister of Public Instruction presides over the assembly, in his robes, as Grand Master of the University, and makes a long harangue to the pupils on some general topic connected with their academic pursuits. Some of the professors also are appointed to deliver Latin orations. The names of the successful candidates are then called out by one of the professors, or other officer of the University, and the minister confers the prize, placing at the same time a wreath of laurel on the pupil's head, and kissing him on the cheek, amid the loud plaudits of the audience. Many of the great officers of state attend on these occasions, and when the young princes of the reigning royal family of France were pursuing their studies in the colleges, where they often gained prizes, the King and Queen used to attend the distribution of prizes in state. Most of the parents of the pupils are present at these solemnities. The names of the pupils, with the specifications of the prizes they have attained, and the order in which they stand, are published, during the course of the year, in a book called the *Livre d'Honneur*, which is extensively distributed throughout the country. The prizes commonly consist of books; and to some of the best candidates, who have not obtained direct prizes, a sort of prize in the form of an honourable mention is allotted.

The following is a list of the subjects for which prizes were awarded at the general competition (*concours général*) of August 1840:—

Class of Philosophy.—French dissertation; Latin ditto; special mathematics; physics (2nd year); elementary mathematics; physics (1st year).

Class of Rhetoric.—Latin essay; French essay; Latin verses; Latin translation; Greek translation; history; cosmography.

Second Class.—Latin theme; Latin translation; Latin verses; Greek translation; Greek theme; history; arithmetic and geometry; chemistry.

Third Class.—Latin theme; Latin translation; Latin verses; Greek translation; Greek theme; history; arithmetic and geometry.

Fourth Class.—Latin theme; Latin translation; Greek translation; Greek theme; history; arithmetic.

Fifth Class.—Latin theme; Latin translation; Greek translation; history; natural history.

Sixth Class.—Latin theme; Latin exercise; history; natural history.

A regulation promulgated by the Minister of Public Instruction, on the 25th of August, 1840, has fixed the studies in the various classes of the colleges, for the future, as follows:—

Seventh or Elementary Class; (the lowest on the list, being that into which the youngest pupils enter).—The French language; the first elements of Latin; sacred history; geography; and arithmetic.

Sixth Class.—The French and Latin languages; the first elements of Greek and ancient history.

Fifth Class.—The French, Latin, and Greek languages; and ancient history.

Fourth Class.—Ancient languages; living languages; Roman history.

Third Class.—Ancient languages; living languages; history of the middle ages.

Second Class.—Ancient languages; living languages; modern history.

Class of Rhetoric.—Ancient languages; history of France.

Class of Philosophy (1st year).—Philosophy; elementary mathematics; mathematics; physics; chemistry; natural history.

Class of Philosophy (2nd year).—Special mathematics; physics; compositions in mathematics and physics.

The minister has also directed that, for the future, in all colleges, there shall be a list made out of all the pupils in each class, according to their order of merit, at the end of the academical year;—that those whose names are among the first three-fourths of these lists may be admitted to the class next above at the commencement of the next academic year; and that those whose names are in the last quarter of the list shall not be allowed to move up without proving their ability to follow the course of the next superior class by an examination at the commencement of the next academic year.

These new regulations are applicable to all colleges and academies throughout France.

Academy of Paris.

The seat or *chef-lieu* of the Academy of Paris is established in the old college of the Sorbonne. The following is a list of the officers and professors of faculties attached to it, as well as of the supplementary and adjoined professors (*agrégés*):—

The Rector, who is generally the Minister of Public Instruction, as being Grand Master of the University.

The Inspector-General of Studies, who is charged with the special administration of the Academy.

Eight Sub-Inspectors.

The Academic Council, composed of the Minister of Public Instruction as President, and 22 Members.

Two Chiefs of Bureaux; one for the Faculties, Colleges, Institutions, &c., the other for the financial management of the Academy.

Faculty of Theology.

Dean of Faculty.	Professor of Hebrew.
Professor of Dogmatic Theology.	— Sacred Eloquence.
— Morality.	Librarian.
— Sacred Scriptures.	Apparitor.
— Ecclesiastical History and Discipline.	Several Deputies and Supplementary Professors.

Faculty of Law.

Dean of the Faculty.	Professor of History of Law.
Professor of the Civil Code (1st year).	— French Constitutional Law.
— ditto (2nd year).	— Administrative Law.
— ditto (3rd year).	— Commercial Code.
— Roman Law.	— Comparative Penal Codes.
— Civil and Criminal Procedure, and Criminal Legislation.	Secretary.
— Pandects.	Librarian.
— Laws of Nations.	Other Officers.
	Several Deputy Professors.

Faculty of Medicine.

Dean of the Faculty.	Professor of Legal Medicine.
Professor of Anatomy.	— Internal Clinics.
— Pathological Anatomy.	— External ditto.
— Medical Chemistry.	— Obstetrical ditto.
— Materia Medica and Therapeutics.	— Pathology and General Therapeutics.
— Hygiène.	— Medical Physics.
— Pharmacy and Organic Chemistry.	— Medical Natural History.
— Internal Pathology.	— Physiology.
— External ditto.	
— Operations and Apparatus.	
— Midwifery, Diseases of Women and Children.	

There are several assistant or deputy professors attached to the above chairs; and there are a considerable number of adjoined professors (*agrégés*) attached to the faculty.

Three Prosectors.
Three Aids in Anatomy.
Five Chiefs of Clinics.
Jury of Examination for Health-Officers.

Secretary.
Librarian.
Conservators of Collections.
Various other Officers.

Faculty of Sciences.

Dean of the Faculty.
Professor of Differential and Integral Calculus.
— Physical Astronomy.
— Mechanics.
— Superior Algebra.
— Physics.
— Chemistry.

Professor of Mineralogy.
— Botanical Physiology and Vegetable Anatomy.
— Zoology and Comparative Anatomy.
— Calculus of Probabilities.
— Geology.

There are also several assistant, or deputy, and adjoined professors attached to this faculty, as well as a secretary, &c.

Faculty of Letters.

Dean of the Faculty.
Professor of Greek Literature.
— Latin Eloquence.
— Latin Poetry.
— French Eloquence.
— French Poetry.
— Philosophy.

Professor of the History of Ancient Philosophy.
— History of Modern Philosophy.
— Ancient History.
— Modern History.
— Geography.
— Foreign Literature.

There are several assistant professors attached to this faculty, besides a secretary and other officers.

The lectures of all the above professors are entirely gratuitous, and open to anybody who chooses to attend; but for those of medicine and law a certain order and duration of attendance are necessary, when they are to be counted for graduation.

The number of regularly-entered students in law is about 3,200; in medicine 2,200.

Forms of Graduation, Examinations, &c. in the several Faculties.

1. *Faculty of Theology.*—No ecclesiastic can be named to the office of bishop, vicar-general, canon, curate (incumbent), or professor in any of the faculties of theology, unless he has obtained the degree of doctor in theology, for the functions of professor or deputy and adjoined professor (*agrégé*); or that of licentiate in theology for the functions of bishop, vicar-general, member of a chapter, or curate in the chief town of any arrondissement or department, unless he has been an assistant minister or curate of a village at least 15 years; or that of bachelor in theology for the functions of curate of the chief place of a canton, unless he has been assistant minister or curate of a village for at least 10 years.

2. *Faculty of Law.*—Every person who aspires to the degree of doctor in law, licentiate or bachelor, or who desires to obtain a certificate of acquirement for the functions of an attorney (*avoué*), must enter his name as a student in some faculty of law, in France, and must follow the prescribed course of lectures with assiduity and punctuality. This entering of the name (*inscription*) must be renewed every three

months;—the first quarter commences on the 2nd of November in each year, the second on the 2nd of January, the third on the 1st of April, and the fourth on the 1st of July. The first inscription is generally made in the November quarter, because that is the commencement of the academic year and of the courses of lectures. Before the student is admitted to inscribe his name he must produce,—1st, the certificate of his birth, proving that he is 16 years of age at least; 2ndly, his diploma as bachelor of letters; and, 3rdly, the consent of his parents or guardians. Those persons who only desire to obtain a certificate as attornies are not required to produce the diploma of bachelor of letters. Persons who do not intend to graduate or to take out certificates as attornies may attend the professors' lectures, but must apply for a ticket of admission, which is never refused. The regular course of lectures to be followed is the subjoined:—

1st. Year.—Civil code, and elements of Roman law—two courses of each.

2nd. Year.—Civil code—two courses; civil and criminal procedure, and criminal legislation—two courses; the pandects—one course.

3rd Year.—Civil code—two courses; code of commerce—one course; administrative law—one course.

This latter year's courses are only obligatory on those students who intend to take the degree of licentiate after that of bachelor. The examinations for the degree of bachelor in law are two,—one on the civil code and the institutes of Justinian; the second on the civil code, the code of procedure, the penal code, and the code of criminal instruction. They are then entitled to receive the diploma of bachelor at the end of their second year.

For the licentiate in law, the students have to attend the third year's course of lectures after becoming bachelors, and then have to undergo two examinations—one in Roman law, the other in the civil code, the code of commerce, and administrative law. They have also to keep a public act, that is, to sustain a thesis in presence of the dean and professors of the faculty. The diploma of licentiate is then delivered.

Those licentiates who aspire to the degree of doctor in law, have to attend a fourth year's course of lectures in the history of law, the law of nations, and French constitutional law; and they have also to attend a second time two courses of the civil code, and a course of Roman law. During this fourth year they undergo two examinations—one in the Roman law, the other in the civil code, the law of nations, the history of law, and constitutional law. They have also to keep a public act in presence of the dean of the faculty, and all the professors.

Students who intend to take out only an attorney's certificate, undergo one examination in the civil code and civil procedure, and they receive their certificates at the end of the first year, during which period they must attend the civil code (2nd year's course) and the course of civil and criminal procedure, and criminal legislation.

There are conferred annually about 3,000 diplomas of bachelors, 600 diplomas of licentiates, and 25 diplomas of doctors. The number of candidates rejected is about 20 per cent. for bachelors and licentiates, and 5 per cent. for doctors.

3. Faculty of Medicine.—This faculty confers only the degree of doctor in medicine, to obtain which, the student must attend the courses of lectures regularly for four years. At the end of the first year he passes

his first examination ; at the end of the third year his second ; at the end of his fourth three more examinations, with the keeping of a public act, and he is then entitled to his diploma. On first inscribing his name as a student of the faculty, the candidate is bound to produce a diploma of bachelor of letters, a testimonial of good life and manners, his certificate of birth, with evidence of the consent of his parents or guardians, if he be a minor. No student can be admitted to pass his examination at the end of his first year, without producing a diploma of bachelor of sciences. The lectures are divided into a winter course, beginning on the 1st of November ; and a summer course, beginning on the 1st of April in each year.

4. *Faculty of Sciences.*—The degrees conferred by this faculty are those of bachelor, licentiate, and doctor.

Every candidate for the degree of bachelor must produce the diploma of bachelor of letters, and then pass examinations in the following subjects :

For the degree of bachelor in mathematical sciences.—Arithmetic, geometry, plane and spherical trigonometry, algebra, including the binomial theorem, and the resolution of numerical equations, the application of algebra to geometry, and the elements of physics and chemistry.

For the degree of bachelor in physical sciences.—Arithmetic, elementary geometry, algebra, including simple equations with one or several unknown quantities, simple machines, and those parts of the elements of statics relating to them, together with the elements of physics, chemistry, and natural history.

Candidates for the licentiate must produce diplomas as bachelors of sciences, and must have attended two courses of lectures of the faculty, at least, during one year. They then have to pass examinations in the following subjects :—

For the degree of bachelor in mathematical sciences.—The differential and integral calculus, and mechanics.

For the degree of licentiate in physical sciences.—Chemistry and physics.

For the degree of licentiate in natural sciences.—Mineralogy, botany, and zoology.

Candidates for the degree of doctor in sciences must produce the diploma of licentiate, and must keep two public acts in mechanics and astronomy, or in physics and chemistry, or else in mineralogy, botany, and zoology, according as they aspire to obtain degrees in either of the three branches corresponding to those of the licentiate.

5. *Faculty of Letters.*—The degrees of this faculty are similar to those of the preceding, *viz.*, that of bachelor, that of licentiate, and that of doctor. It will have been seen that graduation in this faculty is indispensable for admission into either of the faculties of law, medicine, or sciences.

Candidates for the degree of bachelor of letters are bound to produce certificates of birth, of their having studied for at least one year in some college of the Academy, or in some superior school where the study of rhetoric and philosophy is duly authorized, or else of having been educated at home by a regular tutor, or by their father, uncle, or brother. In the Academy of Paris examinations are held four times a year, at any of which candidates may present themselves. These examinations are public, and are conducted by at least four examiners, chosen from the professors of the faculty, or appointed by the Academy.

The examinations are divided into three parts ;—1st, Written Compositions ; 2nd, Translations and Explanations of Greek, Latin, and French Authors ; and, 3rd, Oral Questions.

1st. *Written Compositions.*—The candidates are required to make a written translation from French into Latin, of about the same difficulty as what is required from students in the classes of rhetoric and philosophy in the colleges. The text of the French author is selected by the senior examiner, and is read out aloud by him in sentences and parts of a sentence (*dicté*) to all the candidates who are examined on the same day, and who make their translation as the examiner proceeds. *Each candidate is allowed the use of a Latin dictionary* ; but is not allowed to hold any communication with the others, nor to leave the room till the examination is concluded. This portion generally lasts about two hours. The examiners proceed as soon as possible to the inspection of the compositions thus made, and decide, according to their merits, whether the candidate shall be admitted to the third part of the examination.

2nd. *Translations and Explanations of Authors.*—The candidates explain different passages from Greek, Latin, and French authors, the names of whom, and the parts of whose works from which the passages are liable to be selected, are fixed in perpetuity, and are published in certain lists. These lists are divided each into the same number of subdivisions, and there are as many tickets as there are subdivisions put into a balloting box before the examination begins. The tickets drawn successively from this box by the students, one for Greek, one for Latin, and one for French, and presented by him to the senior examiner, determine the subdivisions in which he is to be examined ; and the examiners then select the passages in which the candidate is to be tried.

The following is the list of authors :—

Greek.—Homer, 1st and 6th Iliad ; Sophocles, *Œdipus Tyrannus* and *Œdipus Coloneus* ; Euripides, *Hecuba* ; Theocritus, 1st Idyll ; Xenophon, four books of the *Memorabilia* ; Plato, 1st *Alcibiades* ; Demosthenes, 1st and 2nd *Olynthian Orations* ; Plutarch, *Lives of Alexander and Cæsar*. *Latin Authors.*—Virgil, 1st *Georgics* and all the *Æneid* ; Horace, 1st *Odes*, 1st *Satires*, 1st *Epistles*, and *De Arte Poetica* ; Ovid, 1st and 2nd *Metamorphoses* ; Terence, *Andria* ; Cicero, *Orations In Verrem* and *Pro Milone*, *De Suppliciis*, *Somnium Scipionis*, *Quæstiones Tusculanæ* ; Tacitus, *Agricola* and 1st *Annals* ; Pliny, *Panegyric of Trajan* ; Livy, *Select Narrations and Speeches* ; Sallust, ditto ; Tacitus, ditto ; Quintus Curtius, ditto. *French Authors.*—Select parts of the works of Corneille, Racine, Molière, La Fontaine, Boileau, Pascal, Bossuet, Fénelon, La Bruyère, Massillon, Montesquieu, Buffon, and Voltaire.

3rd. *Oral Questions.*—This part of the examination relates to a list of questions on subjects, the main divisions of which are fixed for perpetuity, and are published. Numbers are appended to each of the subdivisions, and the candidates draw for their numbers, one for each subject, from a balloting box, the same as for the preceding division of the examination. These questions, which are very comprehensive and numerous, comprise the following subjects :—

Philosophical Questions.—Introduction to Philosophy, Psychology, Logic, Moral Philosophy, History of Philosophy. *Literary Questions.*—On General Literature, Poetry, Eloquence, Literary History. *Historical Questions.*—Prolegomena, Ancient History, Grecian, Roman, Mediæval, and Modern History. *Geographical Questions.*—Prolegomena, Ancient, Mediæval, and Modern Geography. *Mathematical Questions.*—Arithmetic, Geometry, Algebra, together with *Physical and Chemical Questions.*

To gain an idea of the nature of these questions, the following are selected at random from the above divisions:—

History of Philosophy, No. 47.—What is Bacon's method? Give an analysis of the *Novum Organum*. No. 49.—Give an account of the principal modern schools since Bacon and Descartes.

Eloquence, No. 14.—Of the different kinds of arguments, of the *Enthymema*, of the *Syllogism*, of the *Dilemma*.

Literary History, No. 37.—Mention the Greek poets who shone in the principal epochs of Greek poetry, according to the nature of their styles, indicating the dates of their births and deaths, and the titles of their principal works.

Roman History, No. 47.—Division of the Empire; from Diocletian to Constantine; Monarchical Constitution, Administrative and Fiscal ditto under these two Princes; Success of the Roman Armies; Christianity the Imperial Religion; Foundation of Constantinople.

Mediæval History.—History of the Crusades; State of Europe at the time of the first Crusade; State of the East; Christian Kingdom of Jerusalem; the Crusaders take their route by sea; importance of Venice during the 4th Crusade; Latin Empire of Constantinople; Crusades of St. Louis in Egypt and Tunis; general results of the Crusades, political, commercial, industrial, and literary.

Modern Geography, No. 48, *North America*.—Its position, limits, seas that surround it, mountains, lakes, principal states, possessions of European nations, their divisions, inhabitants, governments, religions, principal towns, islands.

Arithmetic, No. 8.—Fractions—origin of fractions; what is meant by numerator and denominator? shew that the value of a fraction is not altered when both its terms are multiplied or divided by the same number; utility of this rule for simplifying fractions; rule for finding the greatest common divisor of two numbers; reduction of whole numbers to fractions; extraction of integral numbers contained in fractions; conversion of decimals into fractions, and *vice versâ*.

Geometry, No. 34.—Problems—to divide a straight line into any number of equal parts; to find a fourth or a mean proportional; to construct a square equivalent to a given polygon; to construct a square equal to the sum of two given squares; to construct a triangle similar to a given triangle, and a polygon similar to a given polygon. No. 37.—Definition of a line perpendicular to a plane—a straight line cannot be partly within a plane and partly without; two straight lines, which cut each other, are in the same plane; the intersection of two planes is a straight line. If a straight line is perpendicular to two others, which cut each other at its foot in a plane, it shall be perpendicular to that plane.

Algebra, No. 49.—Resolution of equations—vanishing of the denominators; transposition of terms; general rule for resolving any equation of the first degree with one unknown quantity.

Physics and Chemistry, No. 12.—What is understood by radiating heat? How is an equilibrium of temperature established between two bodies at a certain distance? Mention the principal experiments for proving that heat traverses certain bodies without increasing their temperature. No. 31.—What difference is there between soft iron and tempered steel, with regard to magnetism? How are magnetic substances made to receive the property of attraction? How is attraction communicated by magnets, by the earth, by electric currents?

The time allowed for translating the French, Greek, and Latin authors, is not less than three-quarters of an hour for each candidate; and that for answering the oral questions is the same. This time may be prolonged at the pleasure of the examiner, but cannot be abbreviated.

When the candidate has passed his examination satisfactorily, in each of the three principal branches, his diploma is granted to him on the production of a certificate of capacity signed by the examiners. This certificate specifies the numbers of the questions answered, with the manner in which the replies were given, the nature of the translation

made, and the merit of the exercise. The names of all the candidates are then entered in the register of the Academy, with full particulars of the mode in which the examination has been passed by each, and with one of the three marks of merit attached to it, viz., *Assez Bien*, *Bien*, or *Très Bien*.

The examination is conducted with great fairness, and a considerable degree of strictness: the number of rejections made every year is large.

The fees for this degree, are 24 francs for the examination, and 36 francs for the diploma; together with 2 francs to the apparitor for the hire of a bachelor's gown, worn during the examination.

Licentiate of Letters.—To be admitted to the examination for this degree, the candidate must produce a diploma of bachelor of letters, and be a bachelor of one year's standing at least. He must also have attended regularly, at least, two courses of lectures of the faculty since his obtaining that degree. The examination consists of,—1st, written compositions; and, 2nd, oral questions.

The written compositions comprise a composition in Latin prose; a composition in French prose; a composition in Latin verse; and a Greek theme.

The subjects of the compositions are selected by the Dean of the Faculty and the examiners jointly; and the compositions are made by the candidates under the inspection of one of the examiners. Each candidate is allowed the use of a Latin and a Greek dictionary in this part of the examination. The compositions in Latin prose and French prose take place on two distinct days; those of Latin verse and the Greek theme on one and the same day. Six hours are allowed for the Latin composition; six for the French; three for the Latin verse; and three for the Greek theme. The exercises are signed by the candidate and placed in the hands of the examiner; and the merit of each exercise is decided on before the candidate is allowed to go in for the oral questions.

For the oral questions, each candidate is required to explain, without any dictionary, a passage in Greek, a passage in Latin, and a passage in French, chosen by lot from among the following works:—

Greek Authors.—Thucydides, Speeches of Pericles; Plato, the Gorgias and 1st Hippias; Aristotle, Rhetoric; Demosthenes, Oratio in Leptinem; Æschylus, Prometheus Vincit; Sophocles, the Choruses of the Œdipus Coloneus; Aristophanes, Plutus; Theocritus, the Combat of Hercules and Amycus. *Latin Authors*.—Cicero, De Oratione, De Legibus; Tacitus, Germania; Seneca, De Beneficiis; Quintilian, the two last books of the Rhetoric; Lucretius, De Naturâ Rerum, lib. v.; Horace, 1st Epistles, 2nd Odes; Seneca, Troades. *French Authors*.—Select parts from Corneille, Racine, Molière, Voltaire, Boileau, Descartes, Pascal, Bossuet, Fénelon, and Montesquieu.

After explaining the passages, the candidate is bound to answer all questions of philosophy, history, literature, language, and criticism, to which the texts he has explained may give rise. This division of the examination must last at least one hour for each candidate. A report on the merits of each candidate is then addressed to the Minister of Public Instruction, and read before the Royal Council of Public Instruction, and the diploma of licentiate is then delivered.

The fees for this degree are 72 francs.

Doctorate of Letters.—Before being admitted a candidate for this

degree, the diploma of licentiate must be produced, and the candidate must then read two theses, one in Latin and the other in French, upon two distinct subjects, selected by himself from those lectured on by the faculty. He must also maintain an argument in *French*, before the dean and the whole faculty, on each of these theses. In general, the dean, and the several professors of the faculty, question the candidate very closely, and carry on an animated discussion, for at least two hours; after which the dean dismisses the candidate with the compliment he deserves. A report is then drawn up, sent to the Minister of Public Instruction, and read before the Royal Council of Public Instruction; after which the diploma is delivered. The fees for this degree are 120 francs. Both this and the preceding degrees are awarded, only, after very severe trials; and several rejections of candidates take place every year.

There are an immense number of "cram-books" published for the Baccalaureate examination; and "cramming-tutors" swarm in Paris. Notwithstanding this the examination is very efficient.

All foreigners, who have taken the degree of Bachelor of Arts or Letters in their own universities, are allowed the benefit of that degree, in the Academies of France, on producing properly-attested diplomas; and in certain cases they can be admitted, *ad eundem*, for the higher degrees in any faculty. This regulation is of great importance to foreign medical students.

The College of France.

This college is one of professors only; founded by Francis I., in 1530, and augmented at various periods. It was remodelled in 1774, and was still further augmented in 1814 and 1831. It stands at the head of all the colleges in the capital.

The chairs are as follows:—

Astronomy, M. Binet.
Mathematics, M. Lacroix.
Physical Mathematics, M. Biot.
Experimental Physics, M. Savart.
Medicine, M. Majendie.
Chemistry, Baron Thénard.
Natural History, M. Elie de Beaumont.
Law of Nature and Nations, M. Rossi.
History and Morals, M. Michelet.
Hebrew, Chaldee, and Syriac, M. E. Quatremère.
Arabic, M. Caussin de Perceval.
Persian, M. Jaubert.
Turkish, M. Desgranges.

Chinese and Mantchou Tartar, M. S. Julien.
Sanskrit, M. E. Burnouf.
Greek, M. Boissonade.
Greek and Latin Philosophy, M. St. Hilaire.
Latin Eloquence, M. Burnouf, sen.
Latin Poetry, M. Tisser.
French Literature, M. Ampère, jun.
Political Economy, M. Chevalier.
Archæology, M. Letronne.
History of Comparative Legislations, M. Lermnier.
Honorary Professor,

All the lectures of these professors are entirely gratuitous and open to every body.

The Museum of Natural History in the Jardin des Plantes.—A large body of professors, and men of science, are attached to this institution; their chairs and offices are as follows:—

Professors Administrators, according to seniority of standing.

Zoology, Mammiferæ, and Birds, M. O. Geoffroy, St. Hilaire.
Geology, M. Cordier, Director of the Museum.
Mineralogy, M. Brongniart, sen.
Zoology (reptiles & fish) M. Duméril.

Botany (country course) M. de Jussieu.
Cultivation, M. de Mirbel.
Applied Chemistry, M. Chevreul.
Comparative Anatomy, M. de Blainville.
General Chemistry, M. Gay-Lussac.
Human Anatomy, M. Flourens.

Zoology, Mollusca, and Zoophytes, M. Valenciennes.
 Zoology, articulated animals, M. Audouin.

Botany (museum course) M. Adolphe Brongniart.
 Comparative Physiology, M. Frederic Cuvier (deceased).

There are 12 assistant naturalists in—

Zoological Laboratories.
 Comparative Anatomy.
 Chemistry.
 Mineralogy.
 Geology.
 Cultivation.

Botany (country course).
 ——— (museum course).
 Zoology (reptiles and fish).
 ——— (articulated animals).
 ——— (mammiferæ and birds).
 ——— (mollusca and zoophytes).

There are also three assistant preparators in general chemistry, applied chemistry, and human anatomy; a librarian; three keepers of the galleries; a painter of animals; a painter of plants, and seven assistant painters; three keepers of the gardens; a secretary; a comptroller of the works; and a captain-commandant of the military guard of the garden.

All the lectures are perfectly open and gratuitous.

The special School of Pharmacy consists of a director; joint director; treasurer; six professors; four assistant professors; a secretary; and a preparator.

All the lectures are open and gratuitous.

The Royal and Special School of Living Oriental Languages at the Bibliothèque du Roi.—This school, founded in 1795, and since augmented, is composed of the following chairs:—

Turkish, M. Jaubert.
 Literal Arabic, M. Reinaud.
 Vulgar Arabic, M. Caussin de Perceval.
 Persian, M. Quatremère.
 Armenian, M. Le Vaillant de Florival.

Modern Greek, and Greek Palæography, M. Hase.
 Hindoostanee, M. Garcin de Tassy.
 Antiquities, M. Raoul Rochette.
 Christian Art, M. Didron.
 ——— Architecture, M. Lenoir.

All these lectures are perfectly open and gratuitous.

The Royal School of Fine Arts and Sciences.—This establishment is divided into two sections; one comprising painting and sculpture, the other architecture. The chairs are as follows:—

1st Section.

Painting, six Professors.
 Sculpture, five ditto.
 Anatomy, one ditto.
 Perspective, ditto.
 History and Antiquities, ditto.

2nd Section.

Theory of Architecture, one Professor.
 History of Architecture, ditto.
 Mathematics, ditto.
 Stereotomy and Construction, ditto.
 Perspective, ditto.

There are also two secretaries, and other officers attached to the school.

All the lectures are gratuitous, and open under certain regulations.

Royal Gratuitous School of Design, &c., for Mechanics.—This most useful institution is under the control of a board of fourteen administrators, and the instruction is given by professors in the following departments:—

Geometry; arithmetic; measuring; architecture; cutting of stone and wood; sculpture of ornaments; figure and animal drawing; flower and ornament drawing.

Several assistant professors are attached to this school. All the lectures are gratuitous and open.

The Royal Conservatory of Arts and Trades.—This establishment, which is principally devoted to the reception of models of all kinds of machines, French and foreign, to the deposit of patents, and all documents connected with them, has also a body of professors attached to it, whose lectures are intended for the instruction of mechanics. These lectures, which are perfectly open and gratuitous, are most numerous attended, and they constitute one of the most useful branches of public instruction in the kingdom. The chairs are as follow :—

Chemistry applied to the Arts.	Agricultural Chemistry.
Geometry and Mechanics ditto.	Descriptive Geometry.
Industrial Economy.	Drawing of Machines.
Physics, and Demonstration of Machines.	— Figures.
Cultivation and Agriculture.	Statistics.
Mechanics and Construction applied to Agriculture.	Industrial Legislation.

There is a school of arts and trades subordinate to this institution; and similar schools, connected with it, are established at Châlons-sur-Marne and Angers.

*Statistics of the Principal Public Libraries in Germany.** Compiled by
Professor ADRIEN, of the University of Giessen.

[Read before the Statistical Section of the British Association, 22nd Sept., 1840.]

		No. of Works in each Library.	
		Printed Books.	Manuscripts.
AUSTRIA.			
<i>Vienna</i>	1. Imperial Library	295,000	16,000
	(Annual expenditure £1,900.)		
	2. Library of the University	103,000	..
	(Annual expenditure £150.)		
	3. Collection of MSS. . . . .	..	80
<i>Grätz</i>	Library of the Lyceum	100,000	..
	Library of the Johanneum	16,000	700
<i>Klagenfurt</i>	Library of the Lyceum	16,000	..
<i>Laibach</i>	Library of the Lyceum	12,000	..
<i>Innsbruck</i>	. . . . .	40,000	70 (?)
<i>Mölk</i>	Monastery.	16,000	1,500
<i>Salzburg</i>	. . . . .	20,000	120 (?)
<i>Brünn</i>	. . . . .	550	424
<i>Olmütz</i>	. . . . .	50,000	700 (?)
<i>Prague</i>	Library of the University	150,000	800 (?)
<i>Pesth</i>	Library of the University	50,000	..
<i>Lemberg</i>	Library of the University	45,000	..
Total		918,550	20,394
PRUSSIA.			
<i>Berlin</i>	1. Royal Library	300,000	4,800
	(Annual expenditure £1,187.)		
	2. Library of the University	40,000 (?)	..
<i>Halle</i>	Library of the University	64,000	..
	(Annual expenditure £280.)		

* The information in this Table has been chiefly obtained by communication with the officers of the several libraries.

		No. of Works in each Library.	
		Printed Books.	Manuscripts.
<i>Breslau</i> . . .	1. Library of the University . . .	110,000	2,300
	2. Rhedigerian Library . . .	20,000	800
	3. St. Maria Magdalen Library . . .	7,000 (?)	30 (?)
	4. Bernhardin Library . . .	10,000	..
<i>Bonn</i> . . .	Library of the University . . .	66,000	..
	(Annual expenditure £240.)		
<i>Königsberg</i> . . .	Library of the University . . .	46,000 (?)	..
<i>Greifswalde</i> . . .	Library of the University . . .	36,000	..
<i>Münster</i> . . .	Library of the University . . .	70,000 (?)	..
<i>Magdeburg</i> . . .	Library of the Cathedral . . .	8,000	400
<i>Erfurt</i> . . .	Boineburg's Public Library . . .	15,000	120 (?)
<i>Dantzic</i> . . .	Senatorial Library . . .	30,000	60 (?)
<i>Zeitz</i> . . .	Library of the Cathedral . . .	13,000	170 (?)
<i>Görlitz</i> . . .	1. Library of the Gymnasium . . .	10,000	300
	2. Library of the Learned Society of } Ober-Launitz }	20,000	319
Total . . .		865,000	9,299

BAVARIA.

<i>Munich</i> . . .	1. Royal Library in 1830-31 . . .	353,424	18,600
	Ditto, now, about . . .	800,000	..
	Annual expenditure since 1837:—		
	1. £960 for Books.		
	2. Library of the University . . .	110,000	400
<i>Würzburg</i> . . .	Library of the University . . .	120,000	250 (?)
<i>Erlangen</i> . . .	Library of the University . . .	105,000	500 (?)
	(Annual expenditure £168)		
<i>Nürnberg</i> . . .	Library of the City . . .	40,000	800
<i>Bamberg</i> . . .	Library of the City . . .	60,000	2,600
<i>Bayreuth</i> . . .	Library of the Chancery . . .	25,000	..
<i>Aschaffenburg</i> . . .	1. Royal Library . . .	22,000	..
	2. Library of the Lyceum . . .	16,000	..
<i>Regensburg</i> . . .	Library of the City . . .	20,000	..
Total . . .		1,308,000	23,150

KINGDOM OF SAXONY.

<i>Dresden</i> . . .	Royal Library . . .	280,000	2,700
	(Annual expenditure £400.)		
<i>Leipzig</i> . . .	1. Library of the University . . .	76,000	2,060
	2. Senatorial Library . . .	70,000	1,369
	(432 Oriental MSS.)		
<i>Annaberg</i> . . .	Library of the Gymnasium . . .	1,400	..
<i>Zwickau</i> . . .	Library of the Lyceum . . .	20,000	120 (?)
<i>Zittau</i> . . .	Senatorial Library . . .	12,000	70 (?)
Total . . .		459,400	6,319

SAXE-WEIMAR.

<i>Weimar</i> . . .	Grand Ducal Library . . .	96,000	700 (?)
<i>Jena</i> . . .	Library of the University . . .	70,000	300 (?)
Total . . .		166,000	1,000

SAXE-MEININGEN-HILDBURGHAUSEN.

<i>Meiningen</i> . . .	Ducal Library . . .	30,000	120 (?)
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		No. of Works in each Library.	
		Printed Books.	Manuscripts.
SAXE-COBURG-GOTHA.			
<i>Gotha</i> . . .	Ducal Library	110,000	5,000
<i>Coburg</i> . . .	1. Ducal Library	24,000	200 (?)
	2. Library of the Gymnasium	8,000	120 (?)
Total		142,000	5,320
ANHALT.			
<i>Dessau</i> . . .	Ducal Library	20,000	..
HESSE-CASSEL.			
<i>Cassel</i> . . .	Electoral Library	70,000	800 (?)
<i>Marburg</i> . . .	Library of the University	60,000	300 (?)
<i>Fulda</i> . . .	Library of the Lyceum	12,000	100 (?)
Total		142,000	1,200
HESSE-DARMSTADT.			
<i>Darmstadt</i> . . .	Grand Ducal Library (Annual expenditure £2,000.)	120,000	700 (?)
<i>Giessen</i> . . .	Library of the University Annual expenditure (£1,000.)	100,000	1,290
<i>Mayence</i> . . .	Library of the City	110,000	300
Total		330,000	2,290
HANOVER.			
<i>Hanover</i> . . .	Royal Library	110,000	1,200 (?)
<i>Göttingen</i> . . .	Library of the University (Annual expenditure £400.)	220,000	5,000
<i>Lüneburg</i> . . .	Library of the City	12,000	400
Total		342,000	6,600
BRUNSWICK.			
<i>Wolfenbüttel</i> . . .	Ducal Library	190,000	4,500
MECKLENBURG SCHWERIN.			
<i>Rostock</i> . . .	Library of the University	45,000	..
WURTEMBERG.			
<i>Stuttgardt</i> . . .	1. Royal Public Library	140,000	360 (?)
	2. Royal Private Library	30,000	1,800
<i>Tübingen</i> . . .	Library of the University	80,000	1,400
<i>Ulm</i> . . . . .	. . . . .	..	..
Total		250,000	3,560
BADEN.			
<i>Carlsruhe</i> . . .	Aulic Library	80,000	300 (?)
<i>Heidelberg</i> . . .	Library of the University	90,000	800 (?)
<i>Freiburg</i> . . .	Library of the University	80,000	..
Total		250,000	1,100
NASSAU.			
<i>Wiesbaden</i> . . .	Public Library	45,000	120 (?)
FRANKFORT.			
<i>Frankfort</i> . . .	Public Library	56,000	60 (?)

		No. of Works in each Library.	
		Printed Books.	Manuscripts.
HOLSTEIN.			
<i>Kiel</i>	Library of the University	70,000	..
<i>Altona</i>	Library of the Gymnasium	12,000	220 (?)
Total		82,000	220
OLDENBURG.			
<i>Oldenburg</i>	Ducal Library.	24,000	..
LUBECK.			
<i>Lübeck</i>	Library of the City	20,000	100
BREMEN.			
<i>Bremen</i>	Library of the Cathedral and the Gymnasium	24,000	..
HAMBURG.			
<i>Hamburg</i>	Library of the City (603 Oriental MSS.)	66,000	3,000
Total		5,792,950	88,252

Seventh Annual Report of the Council of the Statistical Society of London. Session 1840-41.

THE Council having in its last Report entered so fully into an examination of the field of Statistical science, and of the mode in which the Society can most efficiently aid in its cultivation, will hardly be expected to pursue the subject farther on the present occasion. Its duty will be rather to survey what has been done during the past year towards carrying out the suggestions contained in that Report, and to shew the effect which the results are likely to have upon the influence and reputation of the Society.

The Council has first to notice the honour which has been conferred upon the Society, by His Royal Highness Prince Albert having consented to become its Patron, in compliance with the request contained in the Address, which was unanimously agreed to at the last Anniversary Meeting, and by his having inserted his name in the Fellowship Book of the Society.

The attention of the Council was directed, at an early period of last year, to the subject of the decennial census of the United Kingdom, which is to be taken in the summer of the present year ; and it appointed a Committee to report upon the best mode of conducting the enumeration, and upon the nature of the information which it seemed desirable and practicable to collect. Copies of the Report which this Committee presented, were transmitted by the Council to the Secretary of State for the Home Department, to Lord J. Russell, and to Sir H. Parnell, the latter of whom had undertaken, on the part of the Government, to introduce and superintend the progress of the Census Bill. The attention of other influential Members of the Legislature was likewise called to the suggestions contained in the Report ; and the result was, that a Bill which had been previously brought into the House of Com-

mons, and printed, in which it was proposed to take the census according to the imperfect system adopted on previous occasions, and by means of the same obsolete machinery, was withdrawn, and a new Bill, in which the principal recommendations of the Committee were adopted, was introduced in its stead, and subsequently passed.

When it is considered that a correct enumeration of the population forms the basis of administrative measures of the highest importance, as well as of almost every statistical comparison; that the census is only taken every tenth year; and that during the intervals there are no available means of discovering or rectifying an error in the returns, the value of the following changes, to which the Council's Report gave rise, will be duly appreciated. According to the system adopted on previous occasions, the officers employed in England were the overseers of the poor, who were for the most part avowedly incompetent to undertake a task requiring considerable intelligence, precision, and energy. The returns which they obtained from the inhabitants, were not subject to any examination for the purpose of detecting error or fraud; nor was there any security for the correctness of the abstracts which were sent to the Home Office, or any ready or certain means of correcting error when it was detected. According to the system to be adopted this year, the officers acting under the Registrar-General, whose duties in the registration of births, deaths, and marriages eminently qualify them for such a task, are to mark out districts of a convenient size, and to select a qualified enumerator for each. They are afterwards to examine, and if necessary, to amend, the returns sent in by the enumerators. The registrars will have to ascertain that no house shall have been passed over by the enumerators, and the superintendent registrars will have to take care that no district shall have been omitted, or insufficiently examined by their subordinate officers. The original Returns will be transmitted to the Census Commissioners, by whom abstracts will be prepared, on a uniform system, and with an attention to classification, which could not be expected from the overseers. The original Returns will remain in the charge of the Commissioners; so that at any future time further statements, for which the detailed returns afford the materials, may be prepared; an advantage which did not exist under the old system. The heads of inquiry will also be extended to the ages of the population, of which no account was taken in the census of 1831; and to the occupations of each individual, which were so imperfectly recorded on the same occasion as to yield no trustworthy results. Notice will also be taken of the birth-place of persons, so as to ascertain the extent of migration in each district. The same improvements will be made in the method of taking the census in Scotland and Ireland, as far as circumstances will admit, although a different class of enumerators must be employed in each of those divisions of the kingdom.

Encouraged by the successful result of its labours in this matter, the Council has turned its attention to the question of a national "Cadastre," or a general survey and valuation of land and property throughout the kingdom. It would be a matter of surprise that Great Britain should be behind the principal countries of Europe in the execution of this important work, were not the delay in some measure attributable to a difference in the system of taxation; the proportion of revenue derived from direct imposts upon the land and immovable property being

so much greater in those countries than in the United Kingdom. Nevertheless, for many partial and temporary purposes, extensive surveys have been required throughout a large proportion of this country, and great expenses have been incurred in executing them, without the possibility of making the results useful for more general purposes, or of reducing them to one uniform scale or system. It is true that the Government has undertaken an Ordnance Survey, which is rapidly approaching completion in England and Wales; but this was commenced upon so small a scale, one inch to a mile, (upon which for the sake of uniformity it has been continued,) that the results have been rendered wholly useless for other purposes than the illustration of the physical features and topography of the country. That this is not an exaggerated statement is proved by the fact that upon almost every occasion, on which an exact definition of boundaries has been required, it has been found necessary to execute a new survey; as, for instance, to meet the provisions of the Reform Act, of the Municipal Boundaries Act, and of the Act for the Commutation of Tithes. A separate geological survey has also been commenced, and will be extended over the whole of the country already surveyed by the Ordnance. In the same manner separate valuations have been made at different times and for various purposes, without system or uniformity. In commencing the present survey and valuation of Ireland, the same errors have been avoided: the former having been undertaken upon the scale of six inches to a mile, which is sufficiently minute for almost every purpose; and the latter having been calculated upon well-digested principles applicable to the whole island. Had the original survey of England and Wales been conducted upon a similar plan, the money expended upon partial inquiries would have fully reimbursed the additional outlay required for a complete survey. It is with the view of exhibiting these facts in detail, and of calling public attention to them, that the Council has appointed a Committee to collect evidence and to report upon the subject.

To another Committee has been intrusted the consideration of the means of extending the Registration of Births, Deaths, and Marriages to Scotland and Ireland. This subject is attracting considerable attention in the former country, and the Council hopes to derive great assistance from the Royal College of Physicians in Edinburgh, in devising the measures requisite in Scotland.

The Council stated in its last Report that it had forwarded copies of the Report of the Town Council of Leeds, upon the social and physical condition of the inhabitants of that place, to the Municipal Councils of the principal towns in England. From some of these, answers have been received, expressing a disposition to institute a similar inquiry at the time of the census this year. The Council will not neglect to use its influence to extend this inquiry to as many places as possible.

Among the most useful labours which the Council can undertake in the general interest of the Society, is the preparation of a classed catalogue of the books in the Library, both for the purpose of speedy reference for those Members who consult the Library, and as a means of ascertaining the books which are most wanted to supply deficiencies in the principal branches of statistical information. This laborious task has been commenced under the superintendence of Dr. Guy, who has volunteered his valuable time and services for the undertaking. The

Council takes this opportunity of again inviting the Fellows of the Society to contribute to the Library any duplicate copies of Statistical works which they may possess, and any fugitive records of prices, wages, &c., &c., which they have an opportunity of collecting; for these, which may appear of little value at present, will become useful as means of comparison in future years, and may supply to another generation of Statists the information which we often desire, but seek in vain, with reference to the past. The Council has also commenced a collection of specimens of newspapers of different countries, in order to shew the varieties which exist in the form and character of this description of periodical, and to throw light upon the progress of political feeling and literary taste at different epochs, as far as those are indicated by the contents of such publications. To this collection almost every Fellow has the means of contributing specimens of local British papers, and all are accordingly invited to do so.

The Committee on Vital Statistics has been enabled, by the kindness of James Annesley, Esq., late President of the Madras Medical Board, to prepare a Report upon the Sickness and Health of the Troops in the Madras Presidency, which was published in the Journal last summer, and which will in some degree anticipate Major Tulloch's forthcoming Report upon British Troops in the East Indies, while it furnishes the only information which exists on an extensive scale, with reference to the health and mortality of the native troops in India. The same Committee is engaged in prosecuting a similar inquiry into the sanatory state of the troops on the Tenasserim coast. The Council has sent copies of the above Report to the authorities of the East India and War Departments in this country, and to the Governors of the several Presidencies in India, and will do the same with regard to future Reports of a similar nature.

The Report of the Committee of Inquiry into the State of the Working Classes in the parishes of St. Margaret and St. John, Westminster, was laid before the Society last year, and contains a mass of valuable evidence upon a subject which is daily acquiring additional importance.

The labours of the Committee of Inquiry into the State of Education in the Metropolis, have been retarded by various causes during the past year; and the Report upon the Borough of Finsbury, which the Council had hoped to have presented to the Society in the course of last summer, has been unavoidably delayed; but it is now in an advanced state of preparation.

Among the objects which the Council proposes to prosecute during the present year, is the collection of the Statistics of Lunatic Asylums. The treatment of lunatics is a subject of high moral and medical importance, and public attention has lately been called to the merits of different rival systems. It is the part of a Society, such as this, which cannot be interested in the advocacy of any system, to hold the balance, and to weigh the facts relating to each, neither recommending nor depreciating any, but affording unbiassed evidence to those who are desirous of investigating the facts, and of judging with impartiality. In noticing this subject, the Council cannot refrain from referring to the valuable contribution which Lieut.-Colonel Sykes made to the Journal last year, of the Statistics of the Metropolitan Commission in Lunacy.

The Auditors' sheet of Receipts and Expenditure for the year 1840,

which will be laid before you, presents a more favourable balance than that for the preceding year. The liabilities of the Society at the close of the year have decreased, while the amount of stock remains undiminished. Still, the receipts have not been equal to the charge of paying off the heavy debt incurred in 1839, added to the current expenditure of 1840, which has necessarily prevented the Council from embarking in any avoidable expenses during the past year. There is, however, reason to hope that the increase of subscriptions, which will arise from the number of new Fellows who have been elected, or who are candidates for election, during the present session, and the increased receipt of arrears which may be anticipated from the steps about to be adopted by the Council for their collection, will afford the means of reducing the liabilities of the Society at the end of the present year to a mere trifle. The Council will not fail to exert its best endeavours to effect this desirable object.

Two Foreign Members have been elected during the past year, *viz.*—Dr. Holst, of Christiania, and Professor Fallati, of Tübingen; and one Corresponding Member, the Rev. John Diell, of Honolulu, in the Sandwich Islands. The Council has adopted the practice of sending, at quarterly, or half-yearly periods, a circular letter to the Foreign and Corresponding Members of the Society, in which a notice is given of the principal Statistical Publications and Parliamentary Documents that have appeared during the intervals, and of the institution of inquiries likely to produce statistical information. The Council is enabled to state, that these letters are highly valued by the parties to whom they are addressed, and are likely to lead to the receipt of similar communications relating to foreign countries.

The number of ordinary members on the books at the date of the last Report, was 416; it is at present 432; but of this number the Council has to announce that 8 will cease to belong to the Society from the date of this notification, having neglected or refused to pay up their subscriptions for a number of past years. The number of Foreign Members is 24, a vacancy having occurred during the past year by the lamented death of Professor Schlieben, of Dresden; and the number of Corresponding Members is 10.

The Council has much regret in announcing that the office of Treasurer has been resigned by Mr. Hallam, whose letter on the occasion will be read to the meeting. The constant attention of Mr. Hallam to the business and interests of the Society, in its formation and ever since its establishment, has greatly conduced to its success, and must cause the Fellows of the Society to share in the regret of the Council that he has been compelled to withdraw from one of its prominent offices.

* The last subject to which the Council will call the attention of the Society is the Journal, with respect to which it deems itself justified in saying that this publication has materially tended to extend the reputation of the Society, and to promote that favourable opinion of its labours and usefulness, of which there has been abundant evidence during the past year. It has ensured the co-operation of gentlemen, who, living at a distance from London, might otherwise have taken no interest in the proceedings of the Society, or perhaps have even remained ignorant of its existence; it has attracted the contributions of gentle-

men of high reputation in their respective branches of Statistical science ; and the increased interest of its contents during the past year, the growing number and value of papers presented or promised to the Council during the present Session, together with the considerable sale of copies after the large gratuitous distribution made to the Fellows of the Society, and to the principal public institutions, afford incontestable proof of the esteem in which it is held by the public. When it is considered that the Journal is still in its infancy, and is wholly dependent upon voluntary contributions, the Council thinks that it will be acknowledged to hold a high place among publications of a similar character.

Before concluding, the Council would briefly notice three recent measures of the Government, two of which are the result of the improved knowledge, derived from statistical inquiries, of the evils attending the condition of the working classes ; while the third affords the most gratifying evidence of the practical utility of the investigations, which this Society is established to institute and to encourage. The first is the appointment of a Commission to inquire into the employment and condition of all children and young persons of the poorer classes, working together in numbers, who are not already under the protection of the Factories' Act. The Council has reason to believe that the results of this investigation will be of a highly interesting character. The second is the extension of the inquiry into the sanatory state of the working classes, to Scotland, which has been ordered in compliance with memorials from the principal towns in that country, and which promises to be efficiently carried out by the leading officers of the municipal bodies, and by a large number of zealous and intelligent members of the medical profession. The third is the introduction of a Bill to provide for the adequate drainage of buildings, and for their proper structure with regard to ventilation, freedom from damp, and means of cleanliness, which is at present under consideration in the House of Lords, and is calculated to confer the most signal benefits upon large masses of the working classes, by raising them—if needs be in spite of themselves,—out of the demoralizing and destructive state of filth and misery in which they are now generally crowded together, and by removing or lessening that depression of their physical and social condition, which constitutes one of the main obstacles to their moral advancement.

It is a happy omen for the country, that the rich and powerful have thus taken the initiative in investigating the nature and causes of the evils under which the working class labours, and of endeavouring to apply remedies to them. The bond of sympathy between the two classes will hence derive new strength. The former will soon discover how greatly they are interested in the welfare of the labouring class ; and these will cease to believe that there is no sympathy or solicitude for them in the higher ranks. The Statist cannot but view this change with satisfaction : it is to his labours chiefly that the discovery of social evils, and of their appropriate remedies, is to be attributed ; and the Council deem it a great encouragement to themselves and to the Society at large, to prosecute their labours with zeal and energy, that the fruit of their exertions, and of those of their fellow-labourers, has so soon ripened ; and that the harvest of public benefit springing from the results of their labours, promises to be so early and so abundant.

Abstract of Receipts and Expenditure, from the 1st of January to the 31st of December, 1840.

January 1, 1840 :—			December 31, 1840 :—		
	£.	s. d.		£.	s. d.
Balance in the hands of the Treasurer and Secretaries	59	15 6	Rent	105	0 0
Cash received for Arrears of Subscriptions, 2 for 1837	4	4 0	Salaries, Assistant Secretary, and Messenger	201	5 0
“ “ “ 3 “ 1838	6	6 0	Per-Centage to Collector, 1839-40.	27	15 0
“ “ “ 24 “ 1839	50	8 0	Expenses of Housekeeping and Ordinary Meetings	58	8 6
“ “ “ “ 1840	64	16 0	Grant to Working Class Committee	35	0 0
Subscriptions for			“ Library Committee	20	0 0
2 Compositions.			Stationery.	22	6 2
Dividends on Stock, 2 years			Books and Parliamentary Papers	16	11 6
			Postages, Parcels, &c.	9	7 9
			Messrs. Clowes, for Printing	188	17 6
			Editor of Journal, 5 Quarters, including 1 for 1839	93	15 0
			Advertising the Journal.	5	18 0
			Lithography	2	16 0
			Miscellaneous	13	8 6
			Balance in hand, of the Treasurer	52	14 7
			“ “ Secretaries	0	4 9
			Total	£853	3 6
Assets, December 31, 1840 :—			LIABILITIES OF THE SOCIETY, December 31, 1840 :—		
Stock in Red. 3½ per Cents., £596. 17s. cost	£567	0 0	Messrs. Clowes, for Printing the Journal	228	10 0
“ Cons. 3 per Cents., £328. 15s. 4d.,”	300	0 0	“ “ Miscellaneous Printing	29	8 0
Cash Balance	52	14 7	“ Hansard, for Parliamentary Papers	8	2 0
			“ Knight, for Books	7	9 9
			“ Blackwood, “	1	4 0
			* The entries at the foot, refer to the appropriation of two Compositions, amounting to 41l, by the Council, in lieu of funding the same, and withdrawing the sum of £34l., as the annual contribution to the income from 43 funded compositions.		
				£274	13 9
DUE TO THE SOCIETY, December 31, 1840 :—			* Deferred Investment on two Compositions for 1840		
Dividend on Stock				41	0 0
From Messrs. Knight, for sale of Journal					
			Signed { W. H. LLOYD, JOSEPH FLETCHER, HENRY REEVE.		
			Auditors.		
			February 7, 1841.		
			Total Due to the Society		
				£236	14 3
			Contribution of £1 per annum on 43 Compositions		
				43	0 0

PROCEEDINGS OF THE STATISTICAL SOCIETY OF LONDON.

Third Ordinary Meeting, Monday, 18th January, 1841.

Lieut.-Colonel SYKES, F.R.S., Vice-President, in the Chair.

In pursuance of notice given at the last Meeting, the following distinguished Foreigners were elected Foreign Members:—

Dr. John Fallati, Professor of the University of Tübingen.
Dr. F. Holst, of Christiania.

The following gentlemen were elected:—

Thomas Headlam, Esq.	P. L. Simmonds, Esq.
R. C. Griffith, Esq.	John Conolly, Esq., M.D.
William Ottley, Esq., M.A.	Matthew Truman, Esq., M.D.
Thomas Southwood Smith, Esq., M.D.	

Humphrey Ewing M'Lae, Esq., was proposed as a Candidate for admission into the Society.

A paper was read "Remarks on the Abstract of the Parish Registers of Tavistock, Devon," by Dr. C. Barham.—(See p. 34).

Fourth Ordinary Meeting, Monday, 15th February, 1841.

The Right Hon. Viscount Sandon, M.P., President, in the Chair.

The Report of the Auditors of the Society's Accounts for 1840, and the balance-sheet of receipts and expenditure, were read. These documents are appended to the Annual Report.

The following gentleman was elected:—

Humphrey Ewing M'Lae, Esq.

The following gentlemen were proposed as Candidates for admission into the Society:—

The Right Hon. Fox Maule, M.P.	John Moss, Esq.
Alexander Ridgway, Esq.	Adam Hodgson, Esq.
John Griffith, Esq.	Rev. Whitworth Russell.
William John Hamilton, Esq.	Kirkman Hodgson, Esq.
Terrick Hamilton, Esq.	

A paper was read, entitled "Comparison of the Sickness, Mortality, and Prevailing Diseases, among Seamen and Soldiers," by Major A. M. Tulloch, F.S.S.—(See p. 1).

General Anniversary Meeting, 15th March, 1841.

Sir CHARLES LEMON, Bart., M.P., Vice-President, in the Chair.

The Annual Report of the Council for the Session 1840-41. and the Auditors' Report, with the Balance Sheet, were read and adopted, (see p. 69 for the Report, and for the Balance Sheet, p. 75.)

William Horton Lloyd, Esq., and James Whishaw, Esq., were appointed Scrutineers of the Ballot for the Council and Officers; when, those gentlemen having announced the result of the votes, it was announced from the Chair that the following Members were duly elected as the Council for 1841-2:—

Charles Ansell, Esq. F.R.S.	Rt. Hon. Earl Fitzwilliam, F.R.S.
Charles Babbage, Esq. F.R.S.	Joseph Fletcher, Esq.
Rt. Hon. W. Sturges Bourne, F.R.S.	Francis H. Goldsmid, Esq.
John Bowring, Esq. LL.D.	Woronzow Greig, Esq. F.R.S.
John Clendinning, Esq. M.D., F.R.S.	Wm. Aug. Guy, Esq. M.D.
George Coode, Esq.	Henry Hallam, Esq. F.R.S.
Rev. Edgell Wyatt Edgell	James Heywood, Esq. F.R.S.
William Farr, Esq.	Leonard Horner, Esq. F.R.S.

Sir Charles Lemon, Bart. F.R.S.
 George C. Lewis, Esq.
 Nathaniel Lister, Esq. M.D.
 Rt. Hon. Earl Lovelace.
 Rt. Hon. Holt Mackenzie.
 Herman Merivale, Esq.
 G. R. Porter, Esq. F.R.S.
 Rawson W. Rawson, Esq.

Henry Reeve, Esq.
 Viscount Sandon, M.P.
 R. A. Slaney, Esq. M.P.
 Lieut.-Colonel Sykes, F.R.S.
 Thomas Tooke, Esq. F.R.S.
 Major A. M. Tulloch.
 James Wilson, Esq.

A letter from Henry Hallam, Esq., tendering his resignation of the office of Treasurer having been read, it was Resolved, on the motion of the Rt. Hon. Holt Mackenzie, seconded by James Whishaw, Esq., "That this Meeting express the deep regret with which it has learned, that circumstances have induced Mr. Hallam to resign the office of Treasurer, and tender to him its cordial thanks for the important service which he has rendered to the Society in that capacity."

The Scrutineers reported that the following Nobleman and Gentlemen were elected as the Officers of the Society for 1841-2:—

President.—Viscount Sandon, M.P.
Treasurer.—G. R. Porter, Esq., F.R.S.
Honorary Secretaries. { J. Clendinning, Esq., M.D., F.R.S.
 { Joseph Fletcher, Esq.
 { Rawson W. Rawson, Esq.

The thanks of the Society were voted to the Chairman, and the Meeting adjourned.

Fifth Ordinary Meeting, Monday, 15th March, 1841.

The Rt. Hon. VISCOUNT SANDON, President, in the Chair.

The following gentlemen were elected:—

The Rt. Hon. Fox Maule, M.P.	John Moss, Esq.
Alexander Ridgway, Esq.	Adam Hodgson, Esq.
John Griffith, Esq.	Rev. Whitworth Russell.
William John Hamilton, Esq.	Kirkman Hodgson, Esq.
Terrick Hamilton, Esq.	

The following gentlemen were proposed as Candidates for admission into the Society:—

Viscount Ashley, M.P.	Rt. Hon. Andrew Rutherford, Lord
William Baly, Esq., M.D.	Advocate of Scotland.
The Hon. Hugh Fortescue.	Robert Cockburn, Esq.
John Wilson, Esq., M.D.	Bartholomew Bidder, Esq.
J. W. Bosanquet, Esq.	William Hutcheson, Esq., M.D.
Thomas Mann, Esq.	Joseph A. Dorin, Esq.
J. S. Pakington, Esq., M.P.	

The Chairman announced that the following gentlemen had been struck off from the list of Fellows, on account of the non-payment of their subscriptions:—

William Foster, Esq.	John Penson, Esq.
J. G. Phillimore, Esq.	John Parkinson, Esq.
James Mahon, Esq.	Henry Tennant, Esq.
W. C. Ogilby, Esq.	Major Handley, M.P.

The President announced that he had appointed, in accordance with the Regulations, the Vice-Presidents for 1841-2, as follows:—

Sir Charles Lemon, Bart. M.P.	Rt. Hon. W. Sturges Bourne.
Lieut.-Col. Sykes.	Thomas Tooke, Esq.

A paper was read "On the Comparative Mortality of Lunatic Asylums," by William Farr, Esq., F.S.S.—(See p. 17).

*A List of Statistical Papers printed by the Houses of Parliament,
during the Session 1841.*

HOUSE OF LORDS.

Nos.

- 5 Dublin Metropolitan Police—Receipts and Expenditure, 1840.
- 7 Wheat—Sales and Prices in London, July to Sept., 1820-30-40.
- 10 Court of Chancery—Causes set down and heard, &c., 1840-41.
- 14 Courts of Exchequer and Common Pleas—Ditto.
- 22 Queen's Remembrancer's Office—Ditto.
- 33 Court of Queen's Bench—Ditto.
- 44 Wheat—Quantities paid Duty, Rates and Amount of Duty, weekly—June to December, 1840.

Papers which are likewise printed by the House of Commons are not included.

HOUSE OF COMMONS.

- 1 Appeals, Privy Council—Cases heard, &c., 1840.
- 62 Ditto—Sittings and Cases heard, 1833-40.
- 3 Criminal Offenders, Scotland—Annual Returns, 1839.
- 4 Public Income and Expenditure—Balance Sheet, 1840.
- 87 Ditto—Balances, 1837-40.
- 8 Railway Communication—Report of Committee on Grayrig Line to Scotland.
- 9 Naval Receipt and Expenditure—Balance Sheet, 1840.
- 10 Church patronage, Scotland—Presentations by Patrons ; Exercise of Veto, 1834-40.
- 11 Revising Barristers—List on each Circuit.
- 12 Court of Session, Scotland—Number of Causes enrolled, &c., 1840.
- 46 Ditto—Days and Hours of Sitting ; Causes heard, May to July, 1840.
- 13 Lower Canada—Ordinances passed, Anno 3 and 4 Vict.
- 14 Newspaper Stamps—Number issued to each Paper, July to December, 1840.
- 15 Monies in the Exchequer—Amount on 1st Feb., 1841.
- 22 Court of Chancery—Fees received by the Clerk of Affidavits, 1834-40.
- 32 Ditto—Causes heard, &c., 1840.
- 23 Estimates, Ordnance—1841-42.
- 42 Ditto, Army—Ditto.
- 47 Ditto, Navy—Ditto.
- 28 Bank of England—Transactions with Government, 1840.
- 33 Poor Law—Expenditure in each County, 1834-40, &c.
- 34 Northern Light-houses—Receipt and Expenditure, 1839.
- 35 Unfunded Debt and Deficiency Bills—Amount outstanding Jan. and Feb. 1841.
- 36 Mint—Returns of Coinage, &c., 1840.
- 39 East Indies—Acts of the Government of India, 1839.
- 40 Registered Electors, Ireland—Number in each County and Borough, 1835 and 1840.
- 45 Exportation of Hill Coolies—Correspondence, &c.
- 48 Navy—Excess of Expenditure over Estimates, 1839-41.
- 51 Royal Artillery and Engineers—Promotions, 1814-39.
- 52 { Malt—Quantities brewed in London Collection, last Quarters of 1839-40.
- { Sale of Beer Licenses—Number granted in London and Country, ditto.
- 53 Postage—Treasury Warrant relating to Foreign Letters.
- 55 Post-Office Revenue—Net Produce, 1840.
- 127 Ditto—Ditto ; Payments by Public Offices ; Balances, 1840-41.
- 56 Mills and Factories—Report of Select Committee.
- 58 Poor Law—Parishes in Unions ; Amount Levied, &c., 1838-40.
- 60 Emigration, Scotland—Report of Agent-General, July, 1837.
- 61 Trade and Navigation—Annual Comparative Accounts, 1839-40.
- 65 School of Design—Report of Council, 1840.
- 66 Tithe Commutation—Awards confirmed to July, 1840.
- 67 West India Mails—Third Report of Commissioners for selection of Port.
- 68 Canada—Despatch, Mr. P. Thomson's, relating to Seminary of Montreal.
- 128 Ditto—Ditto, Lord Goderich's ditto.

Nos.

- 70 Municipal Corporations—Leases to their own Members, Debts, &c.
- 71 Coinage—Gold, Silver, and Copper, coined at the Mint, 1837-40.
- 164 Ditto—Silver, ditto, 1816-40.
- 73 Army, Navy and Ordnance—Monthly Issues on Account of, 1838-40.
- 74 Queen Anne's Bounty—Receipts and Expenditure, 1839.
- 78 Spanish Claims—Report of Commissioners.
- 81 Emigration to Australia—Correspondence relating to Land Revenue, &c.
- 86 East Indies—Papers relating to Native Ceremonies.
- 88 Shannon Navigation—Report of Commissioners.
- 89 Poor-Law—Unions to which Order for Out-door Relief was sent.
- 97 Troops in India—Papers relating to Rates of Pay at the different Presidencies.
- 98 Vaccine Institution—Report, 1840.
- 99 Factories' Act—Prosecutions for Offences, 1840.
- 100 Convicts—Reports of Superintendent, 1840.
- 106 Court of Bankruptcy—Annual Accounts, 1840.
- 115 Poor-Law—Children. Able-bodied Women, and Weekly Cost, in each Union.
- 116 Railways—Reports and Returns.
- 117 British Museum—Annual Accounts, 1840.
- 118 Ditto—Salaries and Officers.
- 119 South Australia—First Report of Select Committee.
- 129 Ditto—Correspondence relating to Finances of.
- 151 Ditto—Amount of Debts and Claims.
- 120 New South Wales—Despatch, Progress of Discovery, and Occupation.
- 121 County Constabulary—Returns from Counties in which established.
- 123 Registration of Voters, Ireland—Returns from certain Counties.
- 126 Poor-Law—Paupers Relieved, Lady-day Quarter, 1839-40.
- 136 Loan Societies—Abstract of Accounts, 1840.
- 137 Inclosure Bills—List of those passed since 1837.
- 142 Milbank Penitentiary—Report of Superintending Committee, 1840.
- 145 Parliamentary Grants—Amounts Issued, Remaining, and Outstanding Charges, 1840-41.
- 146 Legacy Duties—Amount Received, 1797-1840; Amount Charged, 1840.
- 148 Canada—Application of Extraordinary Grants for Insurrection.
- 149 Poor-Law—Circular and Answers respecting Relief of Vagrants.
- 150 Capital Indictments—Number for certain Crimes, 1837-40.
- 157 Poor-Law—Cost of Workhouses; Expenses of Union Officers, 1838-40.
- 158 New South Wales—Resolution of Legislative Council; Cost of Police and Gaols.
- 176 Public Debt—Additions made thereto, 1834-40.
- 178 Syria—Quantity and Value of Stores sent to.
- 191 Parish Vestries—Parishes with a Population of 10,000 governed by a Vestry, before the passing of the Poor-Law Amendment Act.

PRESENTED BY COMMAND OF HER MAJESTY.

Railways—Report of Officers of Railway Department.
 Bankruptcy and Insolvency—Mr. Law's Separate Report.
 Tithe Commission—Report, 1840.
 Valuations for Poor-Rates, Ireland—Papers.
 Factories—Reports of Inspectors, 1840.
 Hand-Loom Weavers—Report of Commission.
 Emigration to Canada—Papers and Returns, 1840.
 Prisons, Scotland—Report of Directors, 1840.
 Ditto, Ireland—Report of Inspectors, 1840.
 Slave Trade—Treaties with Hayti and Argentine Confederation.
 Ditto—Correspondence; Proceedings at the Gallinas.
 Imam of Muscat—Treaty of Commerce with.
 Persia—Correspondence.

MISCELLANEOUS.

Spain.—The Spanish Regency has ordered a statistical account of Spain to be drawn up. The Report, by the Minister of the Home Department, on which the Decree for this purpose is founded, commences by declaring that statistical knowledge is the corner-stone of every paternal and just administration, and that without it, the material improvements which a country may require cannot be realized.—*Times*.

Correspondence with India.—During the five years preceding the establishment of the over-land mail, the average number of letters received and despatched, annually, was estimated at 300,011; in 1840 the total number conveyed by the new route was 680,842; an increase of 126 per cent.—*Bombay Times*.

Macao.—According to a Return made to the Portuguese Government, the population of Macao in 1832 was 5,359, of whom 1,911 were males, and 3,448 females. Of the total number, 4,073 were Whites, 311 Caffre slaves, 774 Tartar slaves, and 201 of various castes, of whom 163 were slaves.

Goa.—According to the same authority, the population of Goa and the remaining Portuguese provinces in India, exclusive of Macao, was, in 1832, 351,551.

Average Prices of Corn per Imperial Quarter, in England and Wales, with the Rate of Duty on Foreign Wheat, during each Week from 1st January to 26th March, 1841; also the Average of each Month, and the Average Septennial Prices per Imperial Bushel in 1840, calculated according to the Tithe Commutation Act.—(Continued from vol. iii., p. 398.)

DATE.	WHEAT.			WEEKLY AVERAGE.				
	Weekly Average.	Aggregate Average.	Duty on Foreign.	Barley.	Oats.	Rye.	Beans.	Peas.
Weeks ended :—	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Jan. 1 . .	61 8	59 10	27 8	32 11	21 5	32 7	40 1	41 2
8 . .	61 9	60 2	26 8	33 6	21 6	32 6	39 10	39 11
15 . .	61 7	60 6	26 8	32 10	21 8	35 5	40 3	39 11
22 . .	60 9	60 10	26 8	32 11	21 4	34 1	39 7	38 10
29 . .	60 9	61 1	25 8	32 3	21 7	31 5	39 4	39 3
Feb. 5 . .	60 7	61 2	25 8	31 11	21 7	28 11	39 6	39 10
12 . .	61 1	61 1	25 8	31 10	22 3	34 3	40 0	39 6
19 . .	61 10	61 1	25 8	32 0	21 10	35 7	39 2	39 5
26 . .	62 5	61 3	25 8	31 11	22 4	34 9	39 5	38 10
March 5 . .	63 6	61 8	25 8	32 9	22 8	36 6	39 6	39 2
12 . .	63 11	62 3	24 8	32 11	22 11	35 1	39 9	38 9
19 . .	63 9	62 9	24 8	33 2	23 0	36 6	39 7	39 1
26 . .	64 4	63 4	23 8	32 11	23 5	34 9	39 5	39 6
Months :—								
January . .	61 3	60 5	..	32 10	21 6	33 2	39 9	39 9
February . .	61 5	61 1	..	31 11	22 0	33 4	39 6	39 4
March . .	63 9	62 6	..	32 11	23 0	35 8	39 6	39 1
Septennial Ave- rage—1840. }	6 11 $\frac{3}{4}$	..	..	4 1	2 10 $\frac{3}{4}$	..	..	..

Estimate of the Bill Circulation of Great Britain and Ireland at Various Periods, calculated from the Number of Stamps for Bills of Exchange, issued by the Stamp-Office. By — LEATHAM, Esq.

	1815	1824	1825	1826-27
	£.	£.	£.	£.
Bill Stamps for Great Britain, creating the sum of	477,493,100	232,429,800	260,379,400	207,347,000
Supposed Amount drawn on Irish Bill Stamps,* the proportion between Bills drawn in Great Britain and Bills drawn in Ireland being found, from an average of the five Years, from 1835 to 1839, both inclusive, to be as 6 to 1	79,582,183	38,738,300	43,396,566	34,557,833
Add to the above Amount, one-sixth of the Inland Bills, being the Amount of Foreign Bills in circulation	557,075,283	271,168,100	303,775,966	241,904,833
	92,845,880	45,194,683	50,629,327	40,317,472
	649,921,163	316,362,783	354,405,293	282,222,305
Total Amount of Bills in circulation during the Year	162,480,290	79,090,695	88,601,323	70,555,576
To ascertain the average Amount out at one time in each Year, divide by 4, the average date of Bills being found to be } three months				
	1835	1836	1837	1838
	£.	£.	£.	£.
Bill Stamps for Great Britain, creating the sum of	294,775,269	355,283,900	333,268,600	341,947,400
Irish Bill Stamps, creating the sum of	51,109,061	59,155,217	54,179,182	54,359,464
Bills created by Bankers compounding for the Stamps, being found to be one-sixth of the whole retained for } Notes and Bills in England and Wales	1,604,000	2,078,860	2,624,600	2,696,600
Add to the above Amount of Inland Bills, one-sixth, to ascertain the Amount of Foreign Bills in circulation	347,488,330	416,522,977	390,072,382	399,003,464
	57,914,721	69,420,496	65,012,063	66,500,577
	405,403,051	485,943,473	455,084,445	465,504,041
Total Amount of Bills drawn during the Year	101,350,762	121,485,868	113,771,111	116,376,010
To ascertain the average Amount out at one time in each Year, divide by 4, the average date of Bills being } found to be three months				

* No Return of the Number of Irish Bill Stamps issued during the above years has been obtained; but having been found to be one-sixth of the English Bill Stamps, that Amount is added to each year to give the whole Bill circulation for the above years.

An Account of the Quantities of Foreign and Colonial Wheat and Wheat-Flour Imported, Paid Duty, and Remaining in Warehouse, in each of the Months ended 5th January, February and March, 1841, and in the Year 1840.—(Continued from vol. iii., p. 395.)

Months ended	WHEAT.			WHEAT-FLOUR.		
	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.
	Qrs.	Qrs.	Qrs.	Cwts.	Cwts.	Cwts.
5th Jan. ..	38,076	4,991	83,729	152,753	50,578	179,886
5th Feb. ..	13,486	5,602	93,152	43,899	33,626	189,034
5th March.	16,268	1,907	107,555	32,602	37,199	172,661
Year 1840.	1,999,519	2,024,848	..	1,539,565	1,317,815	..

Quarterly Averages of the Weekly Liabilities and Assets of the Bank of England, in the Quarters ended 5th January, 2nd February, and 2nd March, 1841, and in the corresponding Quarters of the preceding Year.—(Continued from vol. iii., p. 395.)

Quarters ended	LIABILITIES.			ASSETS.		
	Circulation.	Deposits.	Total.	Securities.	Bullion.	Total.
1840.	£.	£.	£.	£.	£.	£.
7th Jan.	16,366,000	7,136,000	23,502,000	22,913,000	3,454,000	26,367,000
4th Feb.	16,511,000	7,570,000	24,081,000	22,981,000	3,964,000	26,945,000
3rd March ..	16,678,000	7,896,000	24,574,000	23,223,000	4,271,000	27,494,000
1841.						
5th Jan.	16,112,000	7,049,000	23,161,000	22,362,000	3,557,000	25,919,000
2nd Feb.	16,230,000	7,365,000	23,595,000	22,595,000	3,816,000	26,411,000
2nd March..	16,372,000	7,567,000	23,939,000	22,725,000	4,076,000	26,801,000

Aggregate Amount of Notes circulated in England and Wales by Private Banks, and by Joint-Stock Banks and their Branches, respectively, in each of the Quarters ended 26th September and 26th December, 1839-1840.—(Continued from vol. iii., p. 395.)

Quarters ended	1839			1840		
	Private Banks.	Joint Stock Banks.	Total.	Private Banks.	Joint Stock Banks.	Total.
	£.	£.	£.	£.	£.	£.
26th Sept. ..	6,917,657	4,167,313	11,084,970	6,350,801	3,630,285	9,981,086
26th Dec. ...	7,251,678	4,170,767	11,422,445	6,575,838	3,798,155	10,373,993

An Abstract of the Net Produce of the Revenue of Great Britain, in each of the Years and Quarters ended the 5th January 1840 and 1841.

Description.	Years ended 5th January.			
	1840	1841	Increase.	Decrease.
	£.	£.	£.	£.
Customs	19,840,213	19,754,340	..	85,873
Excise	11,952,252	12,574,562	622,310	..
Stamps	6,574,461	6,735,902	161,441	..
Taxes	3,711,794	3,946,444	234,650	..
Post-Office	1,519,000	441,000	..	1,078,000
Crown Lands	160,000	167,500	7,500	..
Miscellaneous	86,610	78,116	..	8,494
Imprest and other Monies	416,896	445,338	28,442	..
Repayments of Advances.	739,183	603,198	..	135,985
Total Income	45,000,409	44,746,400	1,054,343	1,308,352

Description.	Quarters ended 5th January.			
	1840	1841	Increase.	Decrease.
	£.	£.	£.	£.
Customs	4,779,305	4,380,906	..	398,399
Excise	3,427,271	4,016,366	589,095	..
Stamps	1,587,061	1,596,646	9,585	..
Taxes	1,584,699	1,786,771	202,072	..
Post-Office	351,000	98,000	..	253,000
Crown Lands	40,000	40,000	..	..
Miscellaneous	18,800	12,437	..	6,363
Imprest and other Monies	41,992	32,546	..	9,446
Repayments of Advances.	176,890	123,948	..	52,942
Total Income	12,007,018	12,087,620	800,752	720,150

Total Decrease on the Year, £254,009: Total Increase on the Quarter, £80,602.

An Abstract of the Income and Charges of the Consolidated Fund, in each of the Quarters ended the 5th of January 1840 and 1841.

INCOME.			CHARGE.		
Description.	Quarters ended 5th January.		Description.	Quarters ended 5th January.	
	1840	1841		1840	1841
	£.	£.		£.	£.
Customs	3,805,719	3,644,292	Permanent Debt . . .	8,172,563	8,177,234
Excise	3,448,707	4,037,696	Terminable Annuities .	737,727	679,460
Stamps	1,587,062	1,596,646	Interest on Exche- } quer Bills . . . }	10,920	11,910
Taxes	1,584,699	1,786,771	Sinking Fund . . . . .	..	..
Post-Office	351,000	98,000	Civil List	96,858	97,022
Crown Lands	40,000	40,000	Other Charges	485,015	402,339
Miscellaneous	18,800	12,437	Charge for Advances . .	98,692	70,000
Imprest and other Monies	41,992	32,546	Total Charge	9,601,775	9,437,965
Repayments of Advances	176,890	123,948	The Surplus	1,503,094	1,934,371
Total	11,054,869	11,372,336	Total	11,104,869	11,372,336
Cash applied to pay off } Deficiency Bills . . }	50,000	..			
Total Income	11,104,869	11,372,336			

An Analysis of Bankruptcies in England and Wales, shewing the Counties and Trades in which the same occurred, during each Month from January to March, 1841.—(Continued from vol. iii., p. 399.)

COUNTIES.	January.	February.	March.	TRADES.	January.	February.	March.
Bedford . . .	..	1	..	<i>Persons connected with Manufactures.</i>			
Berks . . .	..	1	2				
Bucks . . .	..	1	..				
Cambridge . .	2	3	..				
Chester . . .	1	3	4				
Cornwall . . .	1	..	..		
Cumberland . .	..	..	1				
Derby . . .	..	..	..	
Devon . . .	..	2	3				
Dorset . . .	..	..	3				
Durham . . .	4	1	1	Cotton Trade	2	2	3
Essex . . .	..	..	1	Woollen do.	4	2	3
Gloucester . .	5	4	9	Silk do. . . . .	..	..	..
Hants . . .	1	2	1	Lineu do.	1	..	1
Hereford . . .	2	1	..	Iron Foundry	2	1	2
Hertford . . .	2	2	2	Metal Wares	4	5	2
Huntingdon . .	..	..	..	Building Trades . . .	7	5	11
Kent . . .	3	3	5	Miscellaneous	10	6	13
Lancaster . . .	14	11	16	<i>Agriculture.</i>			
Leicester . . .	..	..	1				
Lincoln . . .	2	1	3				
Middlesex . . .	23	33	33				
Monmouth . . .	1	1	1	Farmers . . . . .	..	..	..
Norfolk . . .	3	..	4	Corn, Hay, and Hop			
Northampton . .	..	3	3	Dealers, Millers . . .	2	5	5
Northumberland	3	2	1	Cattle and Wool Dealers.	4	2	3
Nottingham . .	1	..	1	Coaches and Horses . .	2	1	..
Oxford . . .	..	..	..	Brewers, Maltsters, and			
Rutland . . .	..	..	..	Distillers	2	6	5
Salop . . .	..	..	2	<i>Other.</i>			
Somerset . . .	2	3	2				
Stafford . . .	3	3	7				
Suffolk . . .	..	..	1				
Surrey . . .	2	9	4	Innkeepers, Victuallers,			
Sussex . . .	..	1	1	and Wine and Spirit			
Warwick . . .	10	8	7	Merchants	11	15	17
Westmoreland . .	..	..	..	Merchants, Bankers, Ware-			
Wilts . . .	..	1	..	housemen, Agents, Bro-			
Worcester . . .	4	1	3	kers, Shipowners, and			
York . . .	17	10	14	Wholesale Dealers . .	11	16	19
Wales . . .	4	2	2	Tradesmen, Shopkeepers,			
				and Retail Dealers . .	43	42	51
				Miscellaneous	5	5	3
Total in 1841 .	110	113	138	Total in 1841 . . .	110	113	138
„ 1840 .	116	141	148				

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JULY, 1841.

Results of the New Postage Arrangements. By ROWLAND HILL, Esq.,
F.S.S.

[*Read before the Statistical Society of London, May 17th, 1841.*]

Revenue.—As the question most rife on the subject of Penny Postage is, How far the recent change has affected, and is likely to affect the revenue? I propose to treat the subject, first in regard to its fiscal relations. In doing so, however, I must renew the protest which I made from the beginning against considering its fiscal effects, and especially its direct fiscal effects, as the criterion of success.—Admitting, however, that the question of direct revenue, though far from being the main point, is of great importance, I proceed to the consideration of this part of the subject.

The net revenue has fallen from upwards of 1,600,000*l.*, the produce of the year 1839, to less than 500,000*l.*, the produce of the year 1840, the falling off being not very much less than 1,200,000*l.*, or three-fourths of the whole. An opinion has indeed been expressed that the diminution is in effect yet greater; inasmuch as the Government is paying for the transmission of its letters, probably as much as 100,000*l.* per annum. As a set-off, however, against this, it is to be observed—first, that under the old system the Government payments to the Post-Office amounted to about 60,000*l.* per annum; and secondly, that in the statement which I have made above, the remaining 40,000*l.* is within a small sum allowed for; so that the real deduction is, as I have said, about 1,200,000*l.* out of 1,600,000*l.*, or three-fourths.

I shall remark here, in passing, that although the diminution in the revenue of the Post-Office of course immediately followed the reduction in postage, yet it was not until the third quarter of 1840, that any diminution appeared in the total revenue of the country. Amongst the causes which thus sustained the revenue under so important a diminution of taxation, it certainly cannot be unreasonable to presume, that increased facility of communication has a place; and I may here add, that in considering the fiscal effects of the change, I have always held out, that compensation to the revenue was to be sought in a very considerable degree in this source.

Having viewed the effect of Penny Postage on the net revenue of the Post-Office, it will be useful to examine the amount of decrease on the gross revenue of that department.

The falling off here is from nearly 2,400,000*l.*, the gross revenue of

1839, to about 1,340,000*l*.* the gross revenue of 1840. On the gross revenue thereof the diminution is considerably less than one-half.

Whether the first year after so enormous a reduction in the rate of taxation could reasonably be expected to produce more than half the gross revenue previously obtained, is a question which the members of this Society, accustomed as they are to examine fiscal changes in the full scope of their operation, will not require me to discuss.

There is one fact, however, which at first view may excite more anxiety than the actual diminution of the revenue; namely, that in the time which has elapsed since the postage was lowered, the net revenue, or at least the payments into the Exchequer, have not made progress. It may indeed be said that they manifest a decline; but were I at liberty to trouble the Society with minute details, relating for instance to the balances in the hands of the Deputy Postmasters and the reserves made to meet the vastly increased money-orders, I could shew that the decline is only in appearance—the fact, however, that the net revenue has hitherto remained stationary may seem to require explanation. It might be submitted, indeed, that looking to the various causes which may affect any branch of the revenue during so limited a period as a year and a quarter, and referring to the depressing circumstances which are known to have existed in the present instance, it might be submitted, I say, that it is too soon to consider this fact as furnishing any inference relative to the eventual result of the measure.

Without, however, admitting the reasonableness of any present demand for direct explanation of this non-increase, I am quite willing to afford such explanation so far as lies in my power.

Expenditure.—A reference to Return No. 4, of those appended to this paper (copies of which lie on the table for the use of the Members,) will shew that the cost of management has increased from about 750,000*l*. in 1839, to about 850,000*l*. in 1840†. Here of course the question arises whether this increase is attributable to the increase in the number of letters. That this is the case to some extent is undoubtedly the fact, but as the whole difference is as much as 100,000*l*., it becomes an important question, what fraction of the increase is attributable to that cause? or in other words, how much of this increased expense would have been incurred had the postage remained on its old footing? As some guide to this inquiry, we must examine what had occurred before the change; and by referring again to Return No. 4, we perceive that the cost of management in the year 1839 was greater than that of 1838, by 70,000*l*.; an increase which, with some trifling exceptions, could have no reference to the reduced rates of postage, and which therefore had its origin in other causes. It becomes necessary, therefore, to inquire whether the causes which thus raised the cost of management by 70,000*l*. in 1839, as compared with the preceding year, tended to produce a similar increase in 1840, as compared with 1839. The most important item in the increase, as appears by consulting Return No. 5, is in the transit of the mails, the cost of which, for Great Britain alone,

* In the Returns the gross revenue is stated at 1,369,604*l*.; but from this sum 27,000*l*. advanced by the British Post-Office to the Irish Post-Office has to be deducted.

† The Return gives 903,677*l*. as the cost of management for the United Kingdom, but under the head "Great Britain" it is shewn that 45,000*l*. must be deducted from this amount.

was greater in 1839 by about 34,000*l.* than in 1838; and has again advanced by about 33,000*l.* in 1840. The cause of this increased expense of nearly 70,000*l.* in two years is in some measure explained by a reference to the second column of the same return, where it appears that the payment for railway conveyance has increased in that period from about 10,000*l.* to 51,000*l.*; while a reference to the first column of the same Return shews, that the expense of conveyance by mail-coaches, instead of diminishing as the railway charge increased, actually increased with it. The explanation of this apparent anomaly is to be found, partly in the establishment of the day-mails, but chiefly in the fact that the opening of the railways, by diminishing competition on parallel lines, has produced an augmentation in the charges for mail conveyance, amounting, in some instances, even to double the previous cost.

From these statements it will appear that the causes which increased the expenditure of 1839 over 1838, were in full operation, so far at least as one important department is concerned, for producing a similar increase in 1840 over 1839. How far the increase in other departments had an independent tendency to continue, it is not easy to determine; but that some increase would have occurred, may fairly be inferred from the actual increase in 1839. Indeed, I may observe, that the increase in the transit postage paid to foreign countries (about 13,000*l.*) has no relation to Penny Postage, and that the charge for conveying the letters of the Office itself (about 10,000*l.*) is a mere matter of account, and no real increase of expense; though of course it is needful to remember that both these items have their effect on the gross receipts. Deducting, therefore, these two sums, together with the 33,000*l.* mentioned above, we have a remainder of 44,000*l.*, which is probably about the amount of increased expenditure fairly chargeable on Penny Postage. This increased expenditure is about 6 per cent. on the previous amount.

It must here be observed, that of the whole increase of 70,000*l.* in the expense of transmitting the mails, no appreciable part is referable to the reduced rate of postage; though of course so far as the increase in the number of letters is concerned, the new day-mails, however few in number, must have their just credit assigned them.

It is also important to remark here, that as the effect of an increased rate of expenditure is not most manifest in the year in which the increase begins, and as moreover the number of railways is rapidly increasing, the expense of transmitting the mails must be expected to undergo further augmentation. Some idea of the probable future magnitude of this item may be derived from the fact, that the present rate of payment from the Post-Office to the Birmingham and Grand Junction railways alone, is as high as 32,000*l.* per annum. Whatever opinion the Society may form as to the value received for this enormous payment, the whole question has clearly no further connexion with the subject of Penny Postage, than as it tends to explain that diminution in the net revenue, for which, at the first view, Penny Postage appears responsible.

Another fact which partly explains the non-increase of the Post Office revenue is, that the number of letters which, from not being paid in advance, are subject to double postage, has been gradually diminishing ever since the period of the great reduction. In the outset, the proportion of such letters was about 20 per cent.; the present proportion is probably about 5 per cent.; shewing, therefore, a diminution

of about 15 per cent. As this diminution would require, to counter-balance it, an increase of 15 per cent. in the number of letters (an increase, be it remarked, of at least 30 per cent. on the old number) it manifestly forms an important item in the account. It should also be remarked that while this change in combination with the increased expenditure referred to above, fully accounts for the non-increase in the net revenue, at the same time, seeing that this source of diminution is nearly exhausted, it can produce no serious effect on the revenue of future years.

Increase of Letters.—Having stated that the direct effect on the revenue must not be taken as our criterion of success, I must here admit, that under certain circumstances, a non-increase would assume a very important character: were the explanation to be found in a non-increase of the number of letters; as the deficiency would then shew a failure in the real object of the change—*viz.*, increased communication by letter. Failure here would be failure indeed; since it would, so far as present experience goes, deprive the measure of all those recommendations, moral, social, and commercial, on which alone it can securely stand. We come now, therefore, to the main and what might perhaps for the present be fairly deemed the sole object of enquiry—*viz.*, what increase has taken place, and is now taking place, in the number of letters?

That some increase has taken place, might be inferred from the fact that while, as stated above, the expenditure has undergone considerable augmentation, and by the gradual decrease in the proportion of unpaid letters, a virtual diminution of postage-rate has been going on throughout the year, it nevertheless appears that there is at least no material decline in the net revenue. Still, not to depend on this inference, however indisputable, I proceed to call the attention of the Society to documentary evidence.

To make the necessary comparison, I shall refer to Return No. 3, by consulting which it will be found, that the only corresponding months for which we have returns (that is, since the reduction of postage), are February, March, and April. The most obvious mode of proceeding, is to compare the gross totals for these three months in 1840 and 1841 respectively; but as from accidental circumstances connected with St. Valentine's day and the Easter holidays, the result of such comparison would be too favourable for a just indication of the average results, I think it safer to found the comparison on the month of March alone, which happens to stand clear of disturbing causes. The total number of letters, then, for the week ending 22nd March, 1840, is under 3,070,000; and the total number for the corresponding week of 1841, is upwards of 3,700,000—the increase being upwards of 650,000, or somewhat more than 21 per cent. It should here be remarked, that as this increase of 21 per cent. is an increase upon the number for March 1840, which was itself, as appears by the Return, an increase of nearly 100 per cent. on the number before the reduction of postage, it follows that the increase accruing between March 1839, and March 1840, is upon the old number of letters an increase of about 40 per cent.; making up a total increase, since the reduction of postage, of about 140 per cent.

Now, unless there is some circumstance tending to shew that the rate of increase is on the decline, it may fairly be assumed that the increase of 40 per cent. on the old number of letters, accruing between March

1839 and March 1840, is the present annual rate of increase. Such a circumstance might seem to exist in the account for the last three months, which shews a decline from February to March, and again from March to April; but as the account for the corresponding months of last year exhibits a similar diminution, it may fairly be inferred that the decrease depends upon season. The disparity, too, in the present year, is greatly increased by the accidental circumstance that the number of letters for the week in February is greatly swollen (apparently to the extent of about 400,000), by that week happening to include St. Valentine's day.

Assuming, then, as I believe I am warranted in doing, that this enormous rate of increase remains in undiminished operation, I have further to remark, that with little exception it is attributable to the single fact of reduced postage; other important causes of increase, therefore, remain to be brought into operation—*viz.*, increased frequency and dispatch in the transmission and delivery of letters—causes, it must be observed, on which, both in my pamphlet and in my evidence before the Parliamentary Committee, I place a reliance scarcely inferior to that which I repose on diminished postage; and the existence of which is therefore essential to the complete operation of the plan, as regards its effects, both on general utility and on the public revenue.

That a great increase in the number of letters may be fairly anticipated from increased dispatch in their transmission, is not only supported by the testimony of the Post-Office authorities, founded upon past experience, and by other important facts already adduced, but likewise receives confirmation from a striking circumstance of recent occurrence.

For the purpose of bringing this before the Society, I must refer to Return No. 1, which exhibits the number of chargeable General-Post letters passing through the London Office, from the beginning of 1839 nearly to the present time. This is a very large class of letters, comprehending more than a third of the whole number for the United Kingdom. A glance at the last column for each year will shew the rapid and steady manner in which these letters have increased since the introduction of Penny Postage. By comparing the returns for the twelve weeks ending 27th April 1839, with the returns for the corresponding period of 1840, it will be found that the immediate effect of the measure was fully to double the number of letters; and by a similar comparison of 1839 with 1841, it will be found that the double is now increased to triple. The respective totals, as shewn by the following table, are, in round numbers for the twelve weeks in 1839, 4,800,000; in 1840, 10,100,000; and in 1841, 15,000,000.

Number of chargeable Letters which have passed through the London General Post (inwards and outwards), for corresponding periods of 12 weeks each, in 1839, 1840, and 1841.

Four weeks ending	Corresponding Periods.			Increase in 1840.	Further increase in 1841.
	1839.	1840.	1841.		
2nd March . . .	1,557,880	3,338,074	5,031,452	..	..
30th March . . .	1,604,356	3,372,667	5,060,127	..	..
27th April . . .	1,656,316	3,404,900	4,966,929	..	..
Total for 12 weeks	4,818,552	10,115,641	15,058,508	5,297,089	4,942,867

The present annual increase, *viz.*, that between 1840 and 1841, is 49 per cent. on the number in 1840; or 102 per cent. on the number in 1839.

Referring again to Return No. 1, we find that the increase in the London General Post letters has been almost without exception steadily progressive ever since the reduction of the rates; the only deviations being in the periods ending the 2nd January and 24th April of the present year; the one period containing the Christmas week, and the other Good Friday and the Easter holidays. A comparison of the succession of totals for 1839, with the same succession for 1840 and 1841, will shew, in a remarkable manner, the rapid progress since the reduction of postage, as contrasted with the absence of progress observable before.

A second reference to the above table will shew that the present rate of increase on this class of letters is, so far as yet appears, more than 100 per cent. per annum on the old number. Now as the increase on this class of letters is so much above the average, we are of course led to enquire whether there is any circumstance by which this class is exclusively or permanently affected. On a closer examination, it appears that the letters comprehended in this grand class may be arranged in three sub-divisions;—the first, comprising those delivered in London; the second, those posted in London; and the third, those merely passing through London. Now while all these classes enjoy, in some degree, the increased facility arising from the establishment of the day-mails, a little consideration will shew that to one class the benefit is much greater than to either of the other two. The letters passing through London were formerly detained fourteen hours in the London office; an interruption which would manifestly, in a very large number of cases, render the sending of a letter altogether useless;—in the number of such letters therefore it might fairly be anticipated that the establishment of day-mails would produce a great augmentation. What then is the fact? While the average increase in the whole class, as stated above, is more than 100 per cent. per annum, the increase in the sub-division comprising the letters posted in London, is only about 70 per cent.; and that on the sub-division comprising the letters delivered in London, only about 65 per cent. Whence it necessarily follows, that the increase in the sole remaining sub-division, comprising the letters merely passing through London, must greatly exceed the average increase of 100 per cent. The actual rate of increase in this sub-division cannot be determined from the existing data, with precision; but I have reason to believe that it is not less than 200 per cent. per annum on the original number of such letters.* Nor am I aware of any circumstance which can satisfactorily explain this discrepancy, save only the increased promptitude of transmission produced by the day-mails. From this fact, therefore, an important inference may be drawn as to the augmentation to be expected whenever the increased facilities originally recommended shall be carried to their full extent.

Restoration of Revenue.—To return to the question of revenue. An

* Before the establishment of day-mails, this class of letters amounted to about 36,000 per week; it is now about 170,000 per week; shewing that increased facilities and reduced postage combined have already increased the number in the ratio nearly of 5 to 1. It must be noticed, however, that under the old system some of these letters were probably conveyed by cross-posts.

enquiry has naturally arisen, as to whether the direct revenue obtained through the Post-Office is ever likely, on the present plan, to regain its former footing; and if so, what length of time such recovery is likely to require? Before entering into this consideration, it may be necessary to remind the Society, that so far as the *net* revenue is concerned, I have never calculated upon obtaining so desirable a consummation; the utmost which I have ventured to predict, is, that in no very long time, this end will be obtained so far as relates to the *gross* revenue. Reckoning upon this, and estimating the increased expenditure consequent on the adoption of the plan at about 300,000*l.*, I allowed, both in my pamphlet and in my evidence, for a deficiency in the net revenue to that amount; which deficiency, however, I expected to see eventually supplied by increased productiveness in other departments of the revenue, consequent upon the stimulus given to trade by increased facility of communication. I deem it necessary to be the more explicit on this point, because, unfortunately, much misapprehension has prevailed thereon; an idea having gained ground that I not only reckoned upon sustaining the net revenue of the Post-Office, but even gave out my plan as a means of obtaining its augmentation. Such conceptions must have originated in the minds of persons whose acquaintance with the statements contained in my pamphlet and in my evidence was obtained either by a very partial or cursory perusal, or by mere hearsay. To this point I shall recur in the close of the paper. It will be sufficient, for the present, to read the following extract from my pamphlet (p. 10, 2nd edition):—"It has, I conceive, been satisfactorily shewn that reduction in postage to a considerable extent, would produce an increase of revenue. A second reduction would therefore be required to bring back the revenue to its present amount; and still a third reduction to bring it within the proposed limits." Now this third reduction, which, as shewn by the extract, was expected to *reduce* the revenue, is the reduction now carried into effect. I may also refer to the estimate which I gave in at my final examination before the Parliamentary Committee (2nd Report, p. 365), and to the evidence thereon; from which the following is an extract:—

"11,056. Leaving the charges on colonial and ship letters as at present, on an increase of fivefold the present number of chargeable letters, are you of opinion that the net revenue would still amount to between 1,300,000*l.* and 1,400,000*l.* a year?—Yes, between 1,300,000*l.* and 1,400,000*l.* a year.

"11,057. How is that as compared with the revenue of 1837?—It is about 300,000*l.* a year less.

"11,058. Your conviction is that the deficit would be made up by the general improvement of trade and commerce in the country?—I think the evidence which has been given before this committee necessarily leads to that conclusion."

To return to the immediate question—the restoration of the gross revenue. The account at present stands thus. The gross revenue for the year 1838, the last year totally unaffected by the great reduction of rate, as shewn by Return No. 4, was, in round numbers, 2,350,000*l.*; and that for the year 1840, the first and only complete year on the new plan, 1,350,000*l.*, shewing a deficit of one million. Now as one million, the deficit, is equal to 74 per cent. on 1,350,000*l.* (the gross

revenue for 1840), it is manifest that in order to restore the gross revenue to its former footing, the number of letters for 1840 must be augmented by 74 per cent. upon that number. Now I have already pointed out that the present rate of increase, as shewn by a comparison between March 1840, and March 1841, is more than 21 per cent. per annum. Supposing, therefore, this rate of increase to be maintained; that is, supposing each succeeding year to bring an augmentation of 21 per cent. as compared with the year 1840, it is obvious that the end in question, *viz.*, the complete restoration of the gross revenue to its former footing, will be attained in about three years and a half from the present time, or in something less than five years from the reduction in the rates.

I must request the Society carefully to remark that I do not here hold out any expectation that such will be the case; but merely shew that it must follow as a necessary consequence, on the verification of a certain supposition, *viz.*, that the present rate of increase continue. How far this supposition will be verified, it is difficult to conjecture—impossible to predict. That the causes on which we have hitherto depended will alone produce so great a result is, I confess, more than I anticipate; but that they will be efficient, when combined with the additional facilities, which, as I have said above, I have always spoken of as essential to the full success of the plan—that they will be efficient thus combined, is a probability on which I think I may count with confidence.

Supposing such facilities to be secured, and the anticipations founded thereon to be realised, a space of five years from the commencement will suffice for the complete financial success of the plan—that is to say, for the complete restoration of the gross Post-Office revenue. Now, in the case of the reduction, in 1825, of the duty on Coffee, a reduction of only 50 per cent., it was not till the fourth year that the revenue recovered its former footing; and had that measure been judged of by its immediate results, or even by those of the second or third year taken abstractedly, it must have been pronounced a financial failure; whereas it is at present universally recognised as a measure of eminent and undoubted success; and indeed the last year, which was the sixteenth since the reduction, yielded a revenue more than double that obtained under the higher rates. Nor is there any reason to suppose that the benefit has yet attained its maximum.

I may observe here, that in one department of the postage, *viz.*, that on the London district letters (heretofore the Twopenny Post letters), the amount of reduction nearly corresponds with the reduction on coffee just referred to; being in fact some little more. How then stands the account with respect to this particular department? The gross revenue for the year 1838 (the last complete year under the old rate), was (after deducting the receipts on General Post letters, then collected by this department), about 118,000*l.*; while the gross revenue for the year 1840, the first complete year under the new rate, was, so near as can be ascertained, 104,000*l.*—shewing a deficiency of only 14,000*l.*; so that to restore the gross revenue of this department to its former amount an addition of only 13 per cent. on the revenue of 1840 is required.

But the present rate of increase in the numbers of letters, as shewn by the following Table, is nearly 14 per cent. per annum.

Number of Letters which have passed through the London District Post (exclusive of all General Post Letters), for corresponding periods of 12 weeks each, in 1840 and 1841.

Four weeks ending	1840.	Corresponding Periods in 1841.	Annual Increase.
29th February .	1,625,136	1,863,128	..
28th March . .	1,522,963	1,766,158	..
25th April . .	1,570,490	1,737,635	..
Totals . .	4,718,589	5,366,921	648,332, or 13·7 per cent.

The increase of letters, if calculated on the estimated number previously to the reduction of rates, is at the rate of nearly 20 per cent. per annum.

It therefore follows that assuming the present rate of increase to continue, the lapse of another year is all that is required for the complete restoration of the gross revenue of this department. This far exceeds any anticipations I had ventured to form, and the fact is the more remarkable, when it is considered that the department in question has lost all that numerous class of letters which formerly came from distant towns by private hands or in parcels, and were distributed in the metropolitan district by its means. I may add, that the annual gross revenue already obtained in this department, equals that produced in the same department so late as the year 1835; provided that in the last mentioned year the necessary reduction be made for the above mentioned charges in General Post letters. Even as regards the net revenue, a comparison of these two years shews, in 1840, no greater deficiency, probably, than about 12,000*l*.

Before proceeding to give a summary of the results, I wish to touch upon one or two topics which, though having no precise place in the view which I have taken, are, nevertheless, not without their interest and importance.

Stamps.—When the plan of stamps was originally proposed, considerable difference of opinion arose as to the probable willingness of the public to avail itself of the arrangement. A glance at Return No. 1, will shew how rapidly the demand has increased from the period of their first introduction; and it is worthy of observation, that latterly the number of stamped letters has exceeded that of letters paid at the time of posting. It need scarcely be observed, that the increasing use of stamps tends to economy and convenience in the Post-Office.

Payment in advance.—Again, as the proportion of letters paid in advance, whether by stamp or otherwise, very materially affects the rapidity of the delivery, besides tending to simplification and economy in the Post-Office accounts, the increased proportion of such letters anticipated from the recent changes, was contemplated as an important advantage. A reference to Return No. 1, will shew whether or not that anticipation has been realised. A glance at the months of January and February 1841, will put the change in a striking light; and for several months the comparison becomes more and more favourable as we proceed.

In November last the proportion of unpaid letters in the London General Post was as low as 6 per cent.; it is a little curious, however

that since that time the proportion has gradually increased; and at present it is as high as 9 per cent. From this it would at first sight appear that the habit of paying in advance is, from whatever cause, on the decline: a close examination, however, shews that such is not really the case. In the London District Post (*see* Return No. 2), the proportion of unpaid letters has, with a single exception (for which we have to thank the votaries of St. Valentine), gradually declined from the introduction of the new system. How then is the apparent retrograde movement in the London General Post to be accounted for? The explanation is to be sought in the fact, that owing to reduced rates and more prompt conveyance, especially as regards North America and India, a large increase has taken place in the number of foreign and colonial letters inwards; on none of which is there any inducement to pay the postage in advance, and on great part of which such payment is impossible. If it be asked why this increase did not manifest itself earlier, the answer is—first, that in the earlier part of 1840 the increase was much more than counterbalanced by the rapid diminution in the number of unpaid inland letters; and secondly, that the reduced rates on the inward foreign and colonial letters could not be in full operation until time had been allowed for a passage to and from the distant colonies and remote foreign countries.

Money Orders.—The safe and cheap transmission of small sums of money manifestly involves important benefits to the public. A reference to Return No. 6, shews the effect produced on the Money Order department by recent changes. The effect produced by the mere reduction of postage, combined with the causes previously in operation, was, as is there seen, to increase the previous amount, within the space of a year, to more than double; while the subsequent reduction in commission on the money orders themselves, made in November last, again increased the amount within the same term to more than sixfold—giving more than fourteenfold increase in the two years. It is to be observed also, that notwithstanding the great reduction in commission (more than 50 per cent.), the present amount of such commfssion is four times as great as in 1839, and nearly twice as great as in 1840. Although the return in question extends to London alone, I have reason to think that we are furnished thereby with a tolerably accurate conception as regards the country at large.

Anticipations and Results.—In conclusion, I trust the Society will not consider it out of place if I attempt a comparison between the expectations held out in my pamphlet and evidence, and the results actually obtained.

Before entering on this consideration, however, it is very important to premise, and I must request the Society to keep the fact constantly in mind, that whatever expectations I held out were all founded on the supposed adoption of my entire plan; that such is the fact will be distinctly shewn by the following extract from the Report of the Parliamentary Committee:—"Mr. Hill considers it very essential to the proper working of his plan, that greater facilities should be given to the transmission of letters. That such facilities would produce a great effect on the number of letters is shewn, he argues, by the fact that the improvements introduced by Mr. Palmer, though accompanied by several augmentations made at different times in the rates of postage, produced a very consider-

able increase in the number of letters. Improved facilities in distribution he considers an essential part of his plan; and until such improvement were adopted, his plan could not be said to be introduced or tried.”*

By the above extract it is distinctly shewn, that increased facilities are no less an essential feature of the plan than reduced postage. At present, with some exception, the reduction alone is in operation. Until, therefore, opportunity shall arise for adding the stimulus of increased facility, the complete fulfilment of my expectations manifestly cannot reasonably be looked for.

Keeping this consideration in mind, I proceed to observe:—

1st. That I calculated that a fivefold increase in the number of letters (that is, an addition of fourfold), would sustain the gross Post-Office revenue.

2nd. That in consequence of the simple and economical arrangements proposed, such an increase in the number of letters would involve an addition of not more than about 300,000*l.* per annum to the expenses of the Post-Office.

3rd. That there would, in such case, be a consequent diminution in the net revenue to the same extent; in other words, that the net revenue would fall from about 1,600,000*l.* to about 1,300,000*l.* In reference to these three heads, I also furnished a table, shewing what in my opinion would probably be the effect of other increases from twofold up to sevenfold.

4th. I held out the expectation, but without attempting to fix the time required, that the above increase of fivefold would eventually be obtained.

5th. Though I held out no expectation publicly as to the result of the first year, yet I did in conversation with many persons express an opinion, founded, however, on the supposed realisation of the whole plan, that the first year's increase would be to the extent of threefold.

6th. I gave it as my opinion that the public would be found willing to pay its postage in advance.

7th. That the infraction of the law, in the illicit transmission of letters, would, in effect, cease on the reduction of the postage.

8th. That the increased opportunity of communication consequent on the adoption of the plan, would produce great moral, social, and commercial advantages; and would prove particularly acceptable and beneficial to the poorer classes. Further, that the deficiency reckoned upon in the net revenue of the Post-Office would eventually be made up by increased productiveness in other fiscal departments

Such were the expectations I held out. The next question is, to what extent the trial of the plan, so far as it has yet been developed, has wrought their fulfilment.

With respect to the first three heads, it is as yet impossible to test my anticipations as to the effect of a fivefold increase; but we have the means of testing them on such increase as has been obtained.

The increase in the chargeable letters is now to about two and a half-fold; and should therefore, according to my calculation, afford about half the former gross revenue; but we have already seen that whereas the former gross revenue was about 2,350,000*l.*, the present gross revenue is about 1,350,000*l.*, or considerably more than half; so that,

* Third Report, p. 64.

even after making some necessary allowances, my anticipations are thus far, at least, fully realized.

With respect to the increased expenses consequent on the adoption of the plan, a reference to p. 82 of my pamphlet (2nd edition), aided by a little calculation, will shew that the anticipated increase from the present number of letters (*viz.*, $2\frac{1}{2}$ -fold the old number) is 58,000*l.* The real increase fairly chargeable to Penny Postage is, as shewn before, only about 44,000*l.*

With respect to net revenue, a similar reference and calculation will shew that the amount anticipated from the present number of letters is 428,000*l.* per annum. The actual net revenue for 1840 is 465,000*l.*

Of my expectation that the complete adoption of the plan would eventually secure a five-fold increase in the number of letters, I trust the Society will be of opinion that, considering the ground already made good, and the present rate of progress resulting in both cases from the partial operation of the plan, there can be no reasonable doubt that such expectation will be realized.

Next, my expectation that the complete adoption of the plan would produce, in the first year, a three-fold increase in the number of letters, appears fully justified by the fact that its partial adoption produced, in the same time, an increase of nearly two and a half-fold.

To justify my anticipations respecting the public willingness to pay its postage in advance, I need only refer to the 1st and 2nd Returns cited before, and to the experience of every one present.

Next, I have the pleasure of reporting that so far as information can be obtained, the illicit transmission of letters has, in effect, ceased.

With respect to the moral, social, and commercial advantages, as also to the beneficial effect on the other branches of the revenue, it is manifestly impossible, at this early period, to give any precise information; probably, however, there are few present but who know of some important epistolary correspondence, that has either been commenced, revived, or enlarged; of some classes of articles hitherto difficult of distribution, which are now regularly conveyed through the post; or of some information, important for commercial, scientific, or social purposes, hitherto limited in its circulation, but which now is rapidly and widely disseminated; lastly, I have the pleasure of stating that the postman has now to make long rounds through humble districts where, heretofore, his knock was rarely heard.

Such are the consequences of the plan, so far as it has yet been developed; and I leave the Society to estimate the results of its complete adoption.

[In the following Returns the entries have been brought down to as late a date as was practicable. Those for April 1841 are referred to in the preceding paper, but they do not appear in the original returns to Parliament; those for May and June have been inserted since the paper was read.]

1839.				1840.				1841.					
Four weeks ending	Unpaid.	Paid.	Total.	Four weeks ending	Unpaid.	Paid.	Stamped.	Total.	Four Weeks ending	Unpaid.	Paid.	Stamped.	Total.
5 January .	1,299,789	201,127	1,500,916	4 January .	1,596,434	505,847	..	2,102,281	2 January	333,433	1,974,684	2,047,120	4,355,237
2 February	1,326,304	217,071	1,543,375	1 February	787,139	2,217,127	..	3,004,266	30 January	370,080	2,204,919	2,108,074	4,683,073
2 March .	1,345,725	212,175	1,557,880	29 February	462,647	2,875,427	..	3,338,074	27 February	406,173	2,349,958	2,275,321	5,031,452
30 March .	1,387,315	217,041	1,604,356	28 March .	385,150	2,986,517	..	3,372,667	27 March	435,388	2,249,080	2,375,659	5,060,127
27 April .	1,429,775	226,541	1,656,316	25 April .	423,930	2,930,970	..	3,404,900	24 April .	449,338	2,191,941	2,325,650	4,966,929
25 May .	1,383,053	236,712	1,619,765	23 May .	410,399	2,630,935	419,984	3,461,278	22 May .	464,697	2,284,045	2,478,459	5,236,201
22 June .	1,383,766	265,314	1,649,080	20 June .	367,831	2,354,932	942,430	3,665,193	19 June .	485,986	2,340,379	2,516,304	5,342,669
20 July .	1,365,343	339,634	1,704,977	18 July .	337,176	2,233,040	1,188,229	3,813,445					
17 August .	1,317,668	302,745	1,620,413	15 August .	351,234	2,181,296	1,439,334	3,971,864					
14 September	1,412,277	299,994	1,712,271	12 September	291,973	2,229,952	1,535,137	4,057,062					
12 October .	1,344,819	298,041	1,642,860	10 October .	303,686	2,201,756	1,671,736	4,182,178					
9 November .	1,307,244	285,587	1,592,831	7 November	267,743	2,119,278	1,910,581	4,297,602					
7 December	1,359,439	323,473	1,682,912	5 December	296,285	2,096,097	1,992,219	4,385,301					

The Fourpenny Rate came into operation on 5th December, 1839; the Penny Rate, on the 10th January, 1840; Stamps, on the 6th May, 1840.

No. 2.—LONDON DISTRICT POST.—Return of the Number of Letters which have passed through the London District Post (exclusive of all General Post Letters), for the same periods (as far as practicable), and distinguished in the same manner as the last Return.

1839.				1840.				1841.				
Total Number of Letters for four weeks, ended 1 January, 1839 .		Total.	Four weeks ending	Paid.	Unpaid.	Stamped.	Total.	Four Weeks ending	Paid.	Unpaid.	Stamped.	Total.
" four weeks, ended 29 Jan., 1839 .	970,953		4 January .	825,292	477,273	..	1,302,555	2 January	810,052	140,328	619,166	1,569,546
" two weeks, ended 12 Feb. "	1,067,358		1 February	1,207,935	331,589	..	1,539,574	30 "	926,264	157,242	752,134	1,835,640
" " 4 May, "	572,742		28 March .	1,312,379	312,757	..	1,625,136	27 February	894,822	207,265	771,041	1,863,128
" " 30 Nov., "	577,273		25 April .	1,308,100	214,863	..	1,522,963	27 March .	833,849	142,766	789,543	1,766,158
	510,693		23 May .	1,368,100	202,390	..	1,570,490	24 April .	821,807	138,618	777,210	1,737,635
			20 June .	1,193,613	197,922	285,079	1,681,614	22 May .	851,513	144,176	855,387	1,851,076
			18 July .	1,001,088	182,914	513,342	1,702,344	19 June .	906,252	140,299	837,724	1,884,275
			15 August .	920,157	175,927	565,145	1,661,229					
			12 September	814,873	159,153	536,197	1,510,223					
			10 October .	752,423	152,441	458,658	1,363,522					
			7 November	790,919	151,106	501,069	1,443,094					
			5 December	830,235	150,429	577,598	1,558,262					
				812,559	148,632	596,997	1,557,918					

The above Returns are all that can be furnished for 1839, and these are partly taken from the Returns dated 13th March, 1840, and from some weekly accounts that were kept in May and November, 1839.

The Penny Rate came into operation as respects this Post, on the 5th December, 1839; Stamps, on the 6th May, 1840.

No. 3.—UNITED KINGDOM.—*A Comparative Statement of the Number of Letters (including Franks during the existence of the Franking Privilege) delivered in the United Kingdom in one Week of each Calendar Month, beginning with November 1839, and ending with the present Time.*

Week ending	ENGLAND AND WALES.				Total Ireland.	Total Scotland.	Gross Total United Kingdom.
	Country Offices.	London, Inland, Foreign and Ship.	London District Post.	Total England and Wales.			
24 November 1839	764,938	229,292	258,747	1,252,977	179,931	153,065	1,585,973
22 December „	963,616	279,457	340,693	1,583,766	225,889	199,032	2,008,687
January 1840	not ascertained						
23 February „	1,658,002	431,298	406,476	2,495,776	349,928	353,933	3,199,637
22 March „	1,607,431	416,887	386,689	2,411,007	321,163	337,326	3,069,496
26 April <i>a</i> „	1,505,609	410,270	390,989	2,306,868	323,074	319,924	2,954,866
24 May „	1,588,809	449,333	418,926	2,457,068	338,407	342,560	3,138,035
21 June „	1,629,123	454,376	441,848	2,525,347	343,761	352,098	3,221,206
19 July „	1,674,410	452,448	400,753	2,527,611	338,495	356,817	3,222,923
23 August „	1,746,257	461,689	343,347	2,551,293	345,831	369,436	3,266,560
20 September „	1,811,213	450,871	340,232	2,602,316	350,318	366,419	3,319,053
25 October „	1,821,711	472,802	387,848	2,682,361	369,297	366,121	3,417,779
22 November „	1,805,325	492,574	387,282	2,685,181	385,672	385,262	3,456,115
20 December „	1,782,579	491,264	405,153	2,678,996	381,306	375,024	3,435,326
24 January 1841	1,929,661	519,625	467,940	2,917,226	386,555	380,242	3,684,023
21 February <i>b</i> „	2,133,197	547,621	504,147	3,184,965	460,380	444,819	4,090,164
21 March „	1,950,501	531,960	447,766	2,930,227	339,877	401,351	3,721,455
25 April „	1,899,485	511,064	454,601	2,865,150	339,989	389,568	3,644,707
23 May . . .	1,908,188	546,170	452,864	2,907,222	391,322	400,581	3,699,125

a Easter Week.

b The increase in this week is owing to the Valentines.

No. 4.—*An Account showing the Gross and Net Post-Office Revenue, and the Cost of Management, for each of the Years ending 5th January, 1839, 1840, and 1841, distinguishing the Revenue of Great Britain from that of Ireland.*

	Year ending 5 Jan.	Gross Revenue. <i>a</i>	Cost of Management. <i>c</i>	Net Revenue.
GREAT BRITAIN.	1839	£ 2,116,798	£ 585,458	£ 1,531,339
	1840	2,162,914	647,257	1,515,657
	1841	1,245,447 <i>b</i>	{ 741,849 27,000 <i>d</i> 18,000 <i>e</i>	{ 453,598
IRELAND.	1839	229,480	101,310	128,169
	1840	227,848	109,472	118,106
	1841	124,156 <i>f</i>	116,827	7,329
UNITED KINGDOM.	1839	2,346,278	686,768	1,659,509
	1840	2,390,763 <i>g</i>	756,999	1,633,764
	1841	1,369,604	{ 858,677 27,200 <i>d</i> 18,000 <i>e</i>	{ 465,927

a Namely the gross receipts after deducting the Returns for “ Refused Letters,” &c.

b This includes the receipts by the Stamp Office for postage stamps in Ireland as well as in Great Britain; the amount for Ireland was 15,029*l.* 5*s.* 5*d.*

c This column includes all charges besides those of management.

d Advance to Ireland.

e Advance to the Money-order Office in London.

f This sum includes 27,000*l.* received from England and is included in charges other than management for Great Britain, but it does not include the proceeds of postage stamps sold by the Stamp Office in Ireland, which amount to 15,029*l.* 5*s.* 5*d.*

g This includes one month of the Fourpenny Rate.

No. 5.—*An Account of the Amount paid by the Post-Office in respect of the Transit of the Mails in Great Britain, during the Years ending the 5th day of January, 1839, 1840, and 1841 ; distinguishing in each Year the Amount paid in respect of the Mails conveyed by Railways.*

Years ending	Amount paid for Convey- ance by Mail- Coaches. <i>a</i>	Amount paid for Convey- ance by Railway.	Total Amount paid for the Transit of Mails.
	£	£	£
5th Jan. 1839	105,107	9,883	114,990
„ 1840	109,246	39,724	148,971
„ 1841	130,352	51,125	181,477
Total . . .	344,706	100,733	445,439

a Including Tolls, Guards' wages, and the hire of the Mail-coaches.

No. 6.—*A Return of the Amount of Money Orders issued in London, and of the Poundage received thereon, in each of the Three Months ending the 5th day of February, 1839, 1840, and 1841 ; also, a Return of the Amount of Money Orders paid in London in each of the same Three Months.*

Months ending	Amount of Money Orders issued.	Poundage.	Amount of Money Orders paid.
	£	£ s. d.	£
5th Feb. 1839	2,623	53 13 0	3,343
„ 1840	5,854	123 15 6	8,141
„ 1841	26,524	215 13 9	59,422

Note.—On the 20th November 1840, the Poundage on Money Orders was reduced from 6*d.* to 3*d.* on sums not exceeding 2*l.*; and from 1*s.* 6*d.* to 6*d.* on sums exceeding 2*l.* and not exceeding 5*l.*

A Statistical Account of the Ancient Prescriptive Jurisdictions over the Thames, possessed by the Corporation of London. By JOSEPH FLETCHER, ESQ., of the Honourable Society of the Middle Temple, Barrister-at-Law.

[*Read before the Statistical Society of London, 19th April, 1841.*]

THE branch of Statistics described in the Sixth Annual Report of this Society, as the “Statistics of Protection,”* having recently occupied little of its attention, some indulgence will perhaps be extended towards the following statements respecting one of the most curious and important of our ancient municipal institutions.

The guardianship of the Thames, with all the trusts that have been aggregated around it, is vested in the Corporation of London, as representing the old “Communitas” of the metropolis : the revenues attached to it are contributed by the people of the metropolis, and its neighbourhood ; and to them are certain public services to be rendered, in return for these revenues. But, the social constitution of London having undergone a complete revolution, while the institutions of the city have been restricted within their ancient limits and their narrowest terms, those who supply the revenues and demand the services, are no longer, as was originally contemplated, the electors of the parties entrusted to administer them. These parties cannot now claim even to be the representatives of the population of 122,395, who are alone included in the city, out of the whole population of 1,511,586, which, according to the census of 1831, forms the population of the metropolitan boroughs ; for in the city population are comprised scarcely 7,500 free-

* ‘Quarterly Journal of the Statistical Society of London,’ April 1840, p. 4.

men householders, who are the electors appointing the common councilmen in the several wards, without any equality of division or uniform system of choice, and from a class assuredly not the highest in the city.

In a body thus based is vested all the jurisdiction, power, and revenue attaching to the guardianship of the Thames, throughout its tidal course, as the principal approach to London, and the chief theatre of its traffic.

To vindicate the magnitude of the interests with which it is concerned, it is requisite merely to give the following numerical statement of the vessels which annually frequent the port of London, formed by the seaward channel of the Thames.

A Return of the Number and Tonnage of Vessels that have entered the Port of London, distinguishing those engaged in the Foreign and Coasting Trades, Colliers, and Fishing Vessels, in the years 1820-30-35-40.

	1820		1830		1835		1840	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Foreign Trade:								
British . . .	3,354	655,239	3,910	744,229	3,780	740,255	4,513	930,291
Foreign . . .	856	122,619	1,268	207,500	1,057	188,893	2,215	353,929
Irish Trade . .	420	43,891	797	105,409	1,163	160,076	1,006	149,755
Colliers . . .	5,921	no record	6,944	1413,243	7,980	1617,530	8,970	1,768,301
Coasters . . .	10,676	ditto	11,316	918,049	11,328	987,376	11,643	932,757
Fishing Vessels	4,949	ditto	4,851	no record	4,483	no record	3,588	no record

A Return of the Number and Tonnage of Steam Vessels, employed in the Trade with the Port of London, and their repeated Voyages, distinguishing those employed in the Coasting and Foreign Trades, in the years 1820-30-35-39.

YEARS.	Coasting Trade.		Foreign Trade.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1820	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
1830	185	48,100	176	25,534	361	73,634
1835	699	181,740	377	84,944	1,076	266,684
1839	1,311	353,335	833	210,232	2,144	563,567*

To find the origin of that guardianship of the river now held by a body so anomalously constituted, we must revert to the age when the "Communitas" of the city, whatever its internal constitution, presented the only authority which had the desire and the means to preserve the Thames from obstructions, encroachments, and nuisances; to protect its fisheries from injury; and to maintain order amid the traffic on its banks.

In these ages arose its prescriptive rights to the *conservancy* of the river itself, and to the *metage* of all measureable commodities brought to market upon its waters. The absence of all charters and statutes creating the latter jurisdiction, seems to sanction its allowance to be prescriptive by the courts of justice and by the Crown at the commencement of the 17th century, when it was first recognised by the State, and when published records concerning it commence. To the former jurisdiction

* All these steamers were British, with the exception of 144, in the Foreign Trade, whose collective burthen was 40,530 tons.

the same antiquity was likewise at this period allowed; and it is demonstrable that its rudiments existed at a very early period, though it is now impossible to regard it as any other than a member of that statutory system for the conservancy of the great rivers of England, which was developed towards the close of the 14th century. If the case quoted in 1616* by the common serjeant, as occurring in the 21st Henry III., be authentic—*viz.*, that the king then confirmed the infliction of a fine, levied to their own use by the corporation, upon parties transgressing near the mouth of the river, the prescriptive origin of the jurisdiction is established; and the grant by Edward III., hereafter mentioned, was merely a confirmation. But this case is the only decisive evidence that has been adduced; whatever prescriptive powers may have existed were remoulded by subsequent statutes, and none appear to have been fully and expressly recognised by the Crown until the reign of James I., although the corporate officers have, on different occasions, quoted many charters and statutes of earlier date, bearing reference to the river; as, for instance, in the evidence before a Committee of the House of Commons, on the port of London, in 1799.†

Reference is here made to charters granted to the citizens of London, in the 8th Richard I., the 1st of John, and the 11th Henry III., which, however, merely provide with regard to the river that all “kiddels” shall be removed out of its channel, especially those erected by the Constable of the Tower. The 23rd chapter of the Magna Charta, of the 25th Edward I., is to the same effect; providing that all *wears* shall be put down by Thames and Medway, and through all England, except only by the sea coasts. By a charter of the 1st Edward III. it is provided, however, that “*the said citizens amove, or take all kiddels in the waters of Thames and Medwaye, and that they shall have the punishments thereof perteyning to us.*”‡ This charter is anterior to the statutory erection of commissions of conservancy generally, and proves the earlier jurisdiction of the corporate jurisdiction in the Thames. From this period until the 3rd James I. the charters of London are silent as to River Conservancy, but there is a complete series of statutes on this subject, which appear both to have moulded this jurisdiction in the Thames, and to have established it in other rivers. The purpose of the provisions contained in Magna Charta for removing wears, is explained by a subsequent statute § to have been “for the great wealth of all this land, in avoiding the straitness of all rivers, so that ships and boats might have in them their large and free passage, and also in safeguard of all the fry of fish spawned within the same;” and such have always been the two great objects of the jurisdiction of conservancy.

It is easy to trace the statutory history of this jurisdiction, in which these two objects are for the most part separately treated. But we will proceed at once to the date when a prescriptive jurisdiction in

* Charge delivered July 3, 1616, to a Conservancy Jury, at Gravesend. Strype’s *Stow*, vol. i., pp. 34-38.

† Appendix to the Minutes of Evidence taken before a Select Committee of the House of Commons, on the Bill for rendering more commodious, and better regulating the Port of London. Ordered to be printed April 25, and May 7, 1799, pp. 273-290.

‡ MS. translation of the Charter, formerly belonging to Mr. Newman, the city solicitor; and now preserved in the Guildhall library, fol. 22 *et seq.*

§ 12 Edward IV., c. 7.

the Thames is first put upon legal record, beside the statutory system of conservancy in all the great rivers of England, entrusted to the conservators of the peace in the several bailiwicks on their banks.

Commissions of Conservancy were issued by the Crown to the Corporation of London for the Thames, under the statute of the 1st of Edward IV., as to the ordinary conservators of the peace in other localities; and the "prescriptive," or, at all events, "anti-statutory" jurisdiction of the city in the river Thames, appears to have been the subject of no public notice until the reign of Henry VIII., when disputes occurred between the Lord High Admiral and the Corporation as to its limits. These were renewed in the succeeding reigns of Edward VI. and Mary, and continued throughout the entire reign of Elizabeth. At length, apparently with an amicable intention, and for ever to put the subject at rest, a *quo warranto* was brought against the city in Trinity term, 3rd James I., when judgment was given in its favour. From the city's plea, on this occasion, was drawn the preamble of James's confirmatory charter of the same year, setting the disputes at rest.*

This charter contains not only the first full recognition of a "prescriptive" right to the *conservancy*, but one also of a prescriptive right to the *metage* of all measurable articles brought upon the river. The terms of this charter are quoted at length in section 60 of the recent local Act of the 1 and 2 William IV., c. 76, for the regulation of the coal trade, and as they form the basis of all existing claims of the city, whether in regard to the "conservancy" or the "metage" jurisdictions, no apology need here be made for introducing them at some length, though still with great curtailment of their excessive verbosity.

In the recent Act referred to it is related that "a charter of His Majesty King James I., bearing date the 20th day of August, in the 3rd year of his reign, after reciting that the mayor and commonalty and citizens of the city of London, from all the time whereof the memory of man was not to the contrary, had had and exercised, and ought and had been accustomed to have and exercise, *the office of bailiff and the conservancy of the water on Thames*, to be exercised and occupied by the mayor of the city aforesaid for the time being, during the time of his mayoralty, or by his sufficient deputies, in, upon, and about the said water of Thames, (to wit,) from the bridge of the town of Staines in the county of Middlesex westwards, to London bridge, and thence to a certain place called Yendall, otherwise Yenland, otherwise Yenleete, towards the sea and eastwards, and in the Medway, and in the port of the city of London aforesaid, and upon every bank, and upon every shore and every wharf of the same water of Thames within the limits and bounds aforesaid, and in, upon, and about each and every of the same, and also by all the time aforesaid had had, and taken, and ought, and had been accustomed to have and take, to their own use, by the mayor of the city aforesaid for the time being, during the time of his mayoralty, or by his sufficient deputies, *all the wages, rewards, fees, and profits, pertaining and belonging to the same office of bailiff*; and also reciting that the same mayor and commonalty and citizens, from all the time aforesaid, had had and exercised, and ought, and had been accustomed to have and ex-

* See a brief statement of the title of the City of London to the conservancy of the river Thames and water of Medway, and the evidence in support thereof, contained in the evidence before the Commons' Committee of 1799, above referred to.

ercise the office of measurer and the measuring of all and singular coals and grains of every kind, and also of all kinds of salt, and all kinds of apples, peas, plums, and other fruits whatsoever, and of all eatable roots of every kind, and also of onions, and of all other merchandises, wares, and things whatsoever, landing, conveyed, or brought in or to the port of the said city of London, upon the said water of Thames, in every ship, boat, barge, or other vessel whatsoever, floating, laden, or remaining, or being on every part of the said water of Thames, and upon every bank, or every shore, or every wharf of the same water of Thames, which should happen to stop, remain, and be delivered, or set down from the aforesaid bridge of the said town of Staines in the county of Middlesex westwards, to the aforesaid London bridge, and thence to the aforesaid place called Yendall, otherwise Yenland, otherwise Yenleete, towards the sea and eastwards, and in the Medway, and in the said port of the city of London aforesaid, exercising and occupying the same office of measurer, and the measuring aforesaid, by the mayor of the city aforesaid, for the time being during the time of his mayoralty, or by his sufficient deputies; and also by all the same time had had, and taken, and ought, and had been accustomed to have and take, to their own use, by the mayor of the city aforesaid, for the time being during the term of his mayoralty, or by his sufficient deputies, *all the wages, rewards, fees, and profits to the same office of measurer belonging and appertaining*; and nevertheless the same mayor and commonalty and citizens, then a short time ago were disturbed therein, and were unjustly hindered in some of the measurings aforesaid, and especially in the aforesaid office of the measuring of coals, supposing that office to the same mayor and commonalty and citizens did not anciently pertain, nor did still pertain or belong, by any lawful grant or prescription, when in truth it plainly and manifestly appeared that that office and all the other premises did anciently pertain and belong, and did then of right pertain to them, and that they had lawfully taken, had, and enjoyed, and ought to take, have, and enjoy the wages, rewards, fees, and profits thereof; in order to put an end to all controversy in that behalf there and at all times thereafter, and to set aside all doubt, and to the intent that the same mayor and commonalty and citizens might more securely, freely, and quietly have, use, exercise, and enjoy *the offices aforesaid and every of them, and the measuring aforesaid, and the wages, rewards, fees, and profits to the same offices and measuring belonging*," &c., approves, allows, ratifies, and confirms the same to them, and their successors; and that another charter of the 13 James I., after reciting that the city had by prescription the measuring of all manner of coals brought to London upon the river Thames between Staines and Yendall, to take away the controversy which had arisen as to the existence of such a right, re-grants and confirms this right, to be executed by the mayor or his deputies, who shall receive a fee of 8d. per ton, of five score and twelve, "*for and in respect of the charge and costs of them, the mayor and commonalty and citizens of the city of London aforesaid, and their successors, in the beam and weights, and for and in respect of their attendance, labour, and necessary costs and expenses to be had and expended in and about the premises*"; which fee of 8d. aforesaid, the mayor and commonalty and citizens of the city aforesaid, had and received formerly, and now have and receive for the weighing of every such like ton of coals," and to "*prevent forestalling, engrossing, and*

*regrating of coals in the port to the great cozenage, damage, and oppression, as well of the poor as of the rich, and also to prevent the obstruction of the river by lighters and other vessels (made by their owners to answer the purpose of 'their common shops and warehouses,') as well as the injury of the channel by the rubbish falling into its river, that no selling of coals afloat shall take place, but from the ship which brought them."**

The charters of James I. here quoted, are confirmed in one of the 14th of Charles I. They remain to the present day the great record of the city's rights over the river, and it is as such that they are recited in this statute.

The offices of Meter and Conservator are asserted from Staines to the mouth of the Thames; the commencement of the city's jurisdiction being marked by a stone, with an apocryphal date, called London Stone, placed on the north bank of the river, a short distance above the present bridge of Staines, and its termination on the south shore, by the formerly navigable creek of Yantlet, separating the Isle of Grain from the main land of Kent, and on the north shore by the village of Leigh, in Essex, placed directly opposite, and close to the lower extremity of Cauvey Island. The shore of the Isle of Grain, which separates the mouths of the Thames and Medway, are thus wholly exempt from the city's jurisdiction; notwithstanding that the right of conservancy is still asserted in the waters of the Medway, from the southern mouth of Yantlet Creek, upwards toward Rochester, as far as Cockham Wood, which is on the northern shore, opposite the marshy point below Chatham. At all events, the corporation of Rochester deny the right of the city of London to conservatorial jurisdiction in the Medway below Yantlet Creek, any more than in the Thames; a limitation which appears to have arisen from this creek having anciently been the customary channel of navigation between the two rivers, and marked the mouths of both. But the passage through this creek being now completely stopped, so that the Isle of Grain is connected by a solid roadway with the parish of Stoke, the mouths of these rivers are properly at the lower extremity of this island, opposite the Nore and Sheerness, while the city's jurisdiction, more ancient than this geographical change, is completely cut by it into two separate portions. About 20 years ago, it was attempted by the city officers, under the direction of a court of conservancy, to reunite these portions, by cutting through the bank which prevents the navigation of fishing-boats through Yantlet Creek; but the final decision of the Court of King's Bench, given July 8th, 1825, on the motion for a new trial, was against this proceeding.

The conservancy jurisdiction in the Medway extends a distance of only 8 miles, but has little more than a nominal existence. In the Thames it extends a distance of 80 miles, over nearly the entire course of that river through the metropolitan valley; and this distance appears to be divided into 34 miles of inland navigation from Staines to Vauxhall Bridge, the towing-path ceasing at Putney; 3 of town thoroughfare, from Vauxhall to London Bridge; and 43 of sea-port, from London Bridge to Yantlet Creek.

The possession of the offices of meter and conservator by the corporation of London, throughout this distance, has given them a *primâ facie* claim to be trustees of all powers and all revenues given, by modern

* 1 and 2 Gul. IV. c. 76, sec. 60.

statutes, for the improvement of the port and navigation within these limits. In fact no other body could well exercise them, if opposed by one possessing these offices ; and it was to be presumed that if the corporation were fit trustees of these, they were fit trustees of the other also. The ancient and the modern portions of the river jurisdiction are exercised, however, by as different functionaries as they are different in their origin. The prescriptive powers for the "Preservation of the River and its Fisheries," by the office of conservator ; and the "Superintendence of its Traffic," by the office of meter or measurer, are consigned to functionaries entirely distinct from the Navigation Committee of the Common Council, which discharges the duties imposed by the modern Acts for the "Improvement and Regulation of the Port and Navigation."

Of the two equally ancient offices of "Conservator" and "Measurer," confirmed to the corporation by the charters of James I., as the two great branches of its ancient river jurisdiction, the latter first claims attention, since it furnishes an enormous revenue beyond the sums required to pay for its due discharge ; a revenue which places it in the power of the corporation to give a character of extraordinary efficiency to the conservancy, the present state of which we will next examine.

Metage.—The prescriptive office of "Measurer" appears to have been claimed and exercised by the corporation, for the purpose of seeing justice done between buyers and sellers, and testifying to their contracts, and of levying the King's Customs. It was to meet the cost of discharging one or both of these duties, and to pay for the trouble of registering the different vessels, that all the corporation dues, either formerly, or now, levied in the port of London, were apparently imposed. But so early is the origin of these dues (generally assessed at their commencement by the prescriptive authority of the corporation itself, though in some instances expressly sanctioned by royal charters),* and so wholly obsolete are the manners and circumstances to which they have reference, that we have little record of the purposes for which various of them were levied, beyond the fact of their continued collection. It is in accordance, however, with a well-known principle of law, that they must have been levied for some express consideration rendered to the community, and a brief examination will shew that we have assigned their true origin.

So late as the year 1830, all the ancient dues taken by the corporation in the port of London, were still collected ; but one class of them has recently been purchased by the State, and abolished. Even this class, however, consisting of the dues on the package, salvage, and portage of aliens' goods, appears in the accounts for 1833, furnished by the Sub-revenue Committee of the Common Council ; and these being the only intelligible accounts on which to base our statements, it will demand a brief notice. The following is a schedule drawn up by the corporate officers themselves, of all the dues now regularly levied in full to the use of the corporation in the port of London, and nearly the whole of their produce, it will be seen, is derived from the prescriptive office of measurer. They divide themselves into two classes, one comprised of the petty dues of groundage, water bailliage, &c., distinguished, with some approach to accuracy, by an asterisk (*) in the columns representing their produce, and demanding but very brief notice ; the other consisting of the great dues arising from the office of metage.

* 12 Edward IV., c. 7.

List of all Dues, Tolls, or Rates levied as part of the General Revenue of the Corporation of the City of London, under any power or authority vested in that Corporation, upon all Articles sea-borne, and entered inwards from the Ports of the United Kingdom in the Port of London, and how levied: and a Return of the Amount so received, upon each kind of Goods, Wares, or Merchandize, in each of the Years 1834 and 1835.

Description of Dues, Tolls, &c., or Rates.	Dues, Toll, or Rate, how levied.	Amount received in the Years					
		1834			1835		
		£	s.	d.	£.	s.	d.
Coals.*—Payment on coals, culm, &c. imported into the Port of London, pursuant to the Act of 1 and 2 Will. IV. c. 76, in commutation of the sum of 4d. per chaldron payable to the corporation, for the <i>metage</i> , <i>groundage</i> , and <i>water-baillage</i> of coals, and of the payments to the mayor, under the 9 Ann, c. 28, and chargeable with the compensations payable to the Lord Mayor, deputy coal meters and others, on the abolition of the <i>metage</i> of coals, 4d. per ton	Payable by factor	34,096	7	0	38,376	16	0
Corn, &c. <i>Metage</i> Dues.—Corn and measurable seeds imported into the Port of London from the ports of the United Kingdom, $\frac{1}{2}$ d. per quarter, Winchester measure.	Payable by seller or factor	4,548	16	$2\frac{3}{4}$	4,700	15	$6\frac{3}{4}$
—, <i>Water Baillage</i> .—All corn and seeds brought coastwise (except the Cinque Ports) imported by non-free-men, per quarter $\frac{1}{4}$ d.							
— <i>Groundage</i> .—Wheat, malt, maize, or brank, on the whole quantity imported of each sort, 6d.							
— <i>Lord Mayor's and Cocket Dues</i> .—Barley, oats, beans, peas, tares, rye and seeds (except mustard and clover seed) on the whole quantity imported of each sort, 1s. 6d.							
— Mustard and Clover seed, on the whole quantity imported of each sort, 3s. 6d.	Chargeable on five quarters or upwards, and payable by the factor or importer	2,111	11	7a	1,867	16	1a
— On each Vessel, 1s. 2d.							
— from the Cinque Ports.— <i>Groundage</i> . Wheat, malt, maize, or brank, on the whole quantity imported of each sort, 6d.							
— <i>Lord Mayor's and Cocket Dues</i> .—Barley, oats, beans, peas, tares, rye, and seeds, including mustard and clover seed, on the whole quantity imported of each sort, 1s. 6d.							
— On each Vessel, 9d.							
(Exclusive of charges for labour.)							
Fruit, Roots, &c.— <i>Metage</i> .—On apples, pears, onions, &c., per bushel, 1d.	Payable by the owner	12	10	10	32	14	2
— <i>Metage</i> .—On potatoes, carrots, turnips, and other roots, per sack, 1d. . . . .	. . . . .	4,326	15	9	5,093	15	0

* The city's separate duties on coals and colliers have been commuted into this one tax, of which nearly the whole produce is carried to the *metage* account.

a Estimated amount.

Description of Dues, Tolls, &c., or Rates.	Dues, Toll, or Rate, how levied.	Amount received in the Years					
		1834			1835		
		£.	s.	d.	£.	s.	d.
— Lord Mayor's and Cocket Dues.—	Payable by importer or merchant on one ton, or forty bushels or upwards . . . }	171	15	0*	192	0	0*
On the whole quantity imported of each sort, 1s. 6d.							
— Each vessel, except from the Cinque Ports, or having corn on board, 1s. 2d.							
— Each vessel from the Cinque Ports, 9d.							
— Each vessel having corn on board, 8d.	Payable by the importer or merchant . . . }	621	13	4*	562	7	0*
<i>Fruits, perishable.</i> —Cherries, plums, &c. on the whole quantity imported, each vessel, 1s. 8d.							
<i>Butter.</i> —On 20 firkins and above, per firkin, $\frac{1}{4}$ d.							
<i>Cheese.</i> —One ton and above, per ton, 8d.							
— On each vessel laden with butter or cheese, 3s. 2d.	Payable by the importer or merchant on one ton or 40 bushels and upwards . . . }	23	8	8*	18	13	0*
— And if with corn or fruit, 2s. 8d.							
<i>Cured Fish.</i> —One ton or 10 barrels and above, on the whole quantity imported, each vessel, 1s. 8d.							
<i>Eggs.</i> —Ten chests or above, on the whole quantity imported, on each vessel, 2s.							
<i>Salt.</i> —Common salt, on the whole quantity imported, on each vessel, 5s. 8d.	Payable by the owner . . . }	336	2	5 $\frac{1}{2}$	313	12	4 $\frac{1}{2}$
— Physical salt, on the whole quantity imported, on each vessel, 2s. 10d.							
<i>Oysters.</i> — <i>Metage.</i> —Per bushel, $\frac{1}{2}$ d., (exclusive of charges for labour and market and dock dues)							
Total of <i>Groundage, Water-bailiage, and other Petty Dues</i>		2,928	8	7*	2,640	16	1*
Total of <i>Metage Dues, including the commuted Metage and Petty Dues on Coals</i>		43,320	12	3 $\frac{1}{4}$	48,517	13	1 $\frac{1}{4}$
Total Dues		46,249	0	10 $\frac{1}{4}$	51,158	9	2 $\frac{1}{4}$

HENRY WOODTHORPE, *Town Clerk.*

Guildhall Hall, London, 30th June, 1836.

[Appendix to Report of Commons' Committee on the Coal Trade, in 1836, No. 13.]

It was here my intention to have submitted to the Society a detailed statement of the machinery, cost, and operation of each of these ancient jurisdictions—in fact, a description of their present exercise; but the extent to which I have already encroached upon its attention in describing their origin, growth, purposes, and revenues, warns me of the impossibility of here doing more than submitting, in brief, the results of an examination, the particulars of which will always be at the command of the Society. These results are derived wholly from accounts and papers of the Common Council itself, and from documents of equal authenticity. The following summary will throw a juster light upon the burthen really entailed upon the metropolitan public by the office of “Meter,” than the preceding schedule compiled by

the corporation officers, although its figures are a year earlier in date, for the reasons already stated.

Summary Statement of the Total Charge upon the Public, and the Net Profit to the Corporation, arising from the Ancient Jurisdiction of Superintendence over the Traffic of the Thames, under the name of, or in connexion with, the prescriptive office of "Measurer" or "Meter," in the year 1833.

Branches of Jurisdiction.	Net Profit to the Corporation.	Total Charge upon the Public.
	£. s. d.	£. s. d.
1. Metage of Fruit and Garden Stuffs, of Salt, and of Oysters, exercised by Officers under no express control . . .	. .	10,140 15 2
2. Metage of Corn, under the direction of the Committee of Control over Corn and Coal Meters, with the government of the Corn Porters . . .	5,819 10 2 $\frac{1}{4}$	23,626 12 11 $\frac{3}{4}$
Total produce of the several branches of the office of Metage yet in full exercise	5,819 10 2 $\frac{1}{4}$	33,767 8 1 $\frac{3}{4}$
3. Metage of Coal, in temporary abeyance as to the exercise of its Duties by the Corporation, though not as to their Receipts of its rewards, while the discharge of its Duties is assumed by a self-constituted body of Factors and Buyers, levying a further Metage-tax on the public	16,302 17 8	59,494 6 6 $\frac{1}{2}$
Total of the sums levied from the public in the name of Metage Dues . . .	22,122 7 10 $\frac{1}{4}$	93,261 14 8 $\frac{1}{4}$
4. Ancient authority for regulating the Craft in Port, under which are yet levied Groundage, Water Bailliage, and Mayor's and Cocket Dues . .	712 6 8 $\frac{1}{2}$	3,118 10 11 $\frac{1}{2}$
Total of the sums levied upon the public for Municipal purposes in the name of Port Dues yet collected in full . . .	22,834 14 6 $\frac{3}{4}$	96,380 5 7 $\frac{3}{4}$
5. Ancient authority for collecting the King's Duties on Aliens' Goods, under which were levied the recently commuted dues of Package, Scavage, and Alien Portorage	10,999 7 0	10,999 7 0*
6. Gauge of Wine and Oils, now partly relinquished	409 12 4 $\frac{1}{2}$	1,228 17 2
Total of the sums derived from the public for municipal purposes in the name of Port Dues, whether now collected or recently commuted	34,243 13 11 $\frac{1}{4}$	108,608 9 9 $\frac{3}{4}$

1. In the *Metage of Fruit and Potatoes*, we find the public left subject to the "excessive" toll collected to their own use by a few officers who render no account whatever to the corporation treasury. In the *Metage of Oysters*, the deputy meters have been successfully

* Of the gross charge upon the community of the package, scavage and portorage dues, there is no published account, and their net produce is therefore entered in this column.

defended in a charge for labour which they do not perform; and thus they receive a second set of dues in addition to the original metage dues, which they claim as an alienable estate, wholly independent of any appointment by the corporation.

2. In the *Corn Metage*, the corporation impose a second set of dues to pay the metage officers, for whose remuneration were imposed those very metage dues which the corporation convert into a clear profit.

3. In the *Metage of Coals*, precisely the same system of double charges was made a claim for the grant by Parliament of a clear duty, which now produces a net revenue approaching 45,000*l.* per annum, enjoyed under a statute which fortunately will very soon expire. The appropriation of a great portion of this revenue is found to possess the same doubtful character as the original charge upon which it is founded; being for the most part a contribution (in the shape of pensions to the discharged piece-work labourers, called deputy meters) to a new system of metage, imposed upon the trade by the coal-factors, who immediately took the greater number of the pensioned deputy meters into their employment, to exercise, under their own immediate direction, that surveillance over the trade which was formerly exercised for them under the patronage of the corporation. One advantage is thus gained by the recent statutes, that it reduces the elements of the old system to a less complicated form; for it has been so arranged that precisely the same revenue that was formerly derived from the public in the shape of metage dues and allowances, is now taken in two distinct sums; one by the corporation, for ceasing to pretend to the discharge of a public office, and the other by the Committee of Factors and Merchants, to pay for the trade police, which the corporation handed over to them.

4. The old port jurisdiction over the vessels in the river is obsolete, except for the collection of the dues, which are seen to be a most unprofitable source of revenue; their total charge upon the public exceeding their net produce by upwards of 400 per cent.

5. It is unnecessary to describe the nature of the jurisdiction over aliens' goods, as it has been lately purchased, and the tax abolished, by the government.

6. The gauge of wine and oils is simply an expensive annoyance to trade, of doubtful legality.

Nearly the whole, if not the whole, of the clear revenue of 34,243*l.* 13*s.* 11¼*d.*, contained in the above summary, is derived from a source which, to say the least, is of a most equivocal character, together with much the greater portion of the remaining sums absorbed by its horde of metage officers, which make the total charge upon the public 108,608*l.* 9*s.* 9¼*d.*, levied chiefly on the food and fuel of the metropolis, merely to defray the expenses of the city's jurisdiction over the traffic in the river Thames.

In return for these sums, the corporation "see justice done between buyer and seller," in the mode which is shewn in its simplest elements in the coal trade. Still, it may be imagined that, whatever its legality, the net revenue derived from this source is perhaps partly returned to the parties from whom it is levied, in the shape of improvements to the port. But the corporation officers themselves have given testimony to the fact, that not one farthing has been so appropriated; and they expressly deny that the corporation has any revenue whatever, out of which

to contribute, in the smallest degree, to the removal of the obstacles by which the navigation of the river is impeded.*

Conservancy.—The following is an account of the sums stated to have been received by the corporation, as *conservators* of the river, for nine years, from 1830 to 1838; together with an intelligible statement of their application, upon which the succeeding section will throw some light.

An Account of Monies received by the Corporation of London, as Conservators of the river Thames, and of the Application thereof, in each year from 1830 to 1838.†

RECEIPT.	1830	1831	1832	1833	1834	1835	1836	1837	1838
	£.	£.	£.	£.	£.	£.	£.	£.	£.
To amount received for rents and fines, for platforms, piles, &c., in the years ending Michaelmas—above London Bridge . .	618	538	579	563	715	472	607	529	599
Ditto ditto—below Bridge . .	1047	847	763	688	691	788	642	741	633
Total . . .	1665	1385	1342	1251	1416	1260	1249	1270	1232
EXPENDITURE.									
By expenses of committee . .	199	121	183	193	200	272	245	244	137
By expenses of boat-hire, towing, wages, and sundry disbursements	129	229	44	388	594	402	158	284	512
By poundage on collection of rents, &c.	88	69	67	63	71	64	62	63	62
By law and parliamentary charges . .	..	..	..	..	..	..	194	141	..
By removing piles and shoals in the river . . . . .	..	..	..	303	..	..	582	802	..
By artificers' work, stationery, printing, and sundries . .	..	..	..	23	31	103	23	17	..
Applied in aid of the fund for improving the navigation of the river, under the Acts of the 50th, 52nd, and 54th Geo. III. . .	..	..	..	281	520	419	..	..	..
Applied in aid of the expenses of conservancy	1249	966	1048	..	..	..	..	..	..
Total . . .	1665	1385	1342	1251	1416	1260	1264	1551	711

Balance in hand of the years 1836, 1837, and 1838, £225 9s. 7d.

No separate Account is kept of the expenditure for works performed above and below Bridge.

A close examination into the present operation of this jurisdiction of conservancy shews, that as regards its functions in the preservation of the fisheries, it is virtually obsolete, partly because of the decline of these fisheries, and partly because of the unwieldiness of the tribunal; while its functions for the preservation of the navigable channel are superseded by those granted for its improvement.

Besides being used as a claim to the administration of all funds devoted to the improvement of the river, it serves as an engine by means of which no less a sum than 1,690*l.* 19*s.* 5*d.* was raised, as *rents for encroachments*, from the proprietors along its banks, in the single year 1833. Of this, 439*l.* 12*s.* 5*d.* was paid into the city's cash, and may be supposed to be applied in part defrayal of the conservancy expenses above described. The rest, though ostensibly applied to purposes of public service, is really devoted to far different objects; so that the total cost of the conservancy jurisdiction to the community, in that year, may be stated at 3,868*l.* 1*s.* 10*d.*

* Evidence before the Port of London Committee, in 1836.

† Report of the Thames Embankment Committee of the House of Commons, in 1840, Appendix, p. 81.

*Statistics of Newspapers in various Countries.**

By P. L. SIMMONDS, F.S.S.

[*Read before the Statistical Society of London, 21st June, 1841.*]

It is worthy of observation, that the History and Statistics of the Newspaper Press, and of Periodical Literature in general, have occupied a very small share of public attention. This will appear the more remarkable, when we consider the popularity of the subject, its interesting features, and the important bearings and influence of this portion of the Press upon society. It may be that the vast extent of the newspaper press, the facility with which these ephemeral sheets may be consulted, and the regular manner in which intelligence from all lands is brought home by their aid to our own firesides, with a degree of correctness and speed unparalleled in the history of bygone ages, make them to be comparatively slighted, after the manner of the adage—that familiarity breeds contempt. Were they more scarce and inaccessible, their importance would perhaps be better estimated, and their influence and benefits more highly appreciated.

It is a strange anomaly, that in England alone, newspaper writers are looked down upon as an inferior caste of literati; and that the purveyors of intelligence, whose especial business is to inform and instruct the public—who must of necessity be men of diversified talent, and extensive knowledge—who are in many cases individuals of superior literary attainments—and who are generally the first to publish and make known important inventions and scientific improvements—whose judgment, moreover, is to approve or condemn works, treating often of the most exalted or most abstruse subjects,—are themselves a proscribed race. And yet, at no former period perhaps, was the Newspaper Press so popular, or in such high repute and importance as at the present time. This is more especially the case in France and in England. In the former country, the pens of the greatest men and most talented authors are continually engaged on periodical literature. There is, however, this marked difference between the two countries, that in France the writers, with an honest pride, generally append their names to the articles which they contribute. MM. Thiers, Guizot, B. Constant, Chateaubriand, Arago, and De Villèle have been frequent contributors to newspapers;—while in England, to identify a distinguished public man, or an eminent author as a newspaper writer, would be considered a decided insult. And yet the secret history of the English newspapers, if laid bare, would display a host of talent, and an array of distinguished names, that would scarcely be credited by those who are not acquainted with the subject.

If newspapers be, as we believe they are, one of the best criterions of the intelligence and commercial prosperity of a nation, it follows that an enquiry into the subject must be attended with beneficial results, particularly in a statistical point of view. The Newspaper Press presents a wide and interesting field of observation; and an examination into the channels of intelligence and information possessed by different countries, treating of their number, literary and political character, freedom of dis-

* Mr. Simmonds is preparing, for early publication, an extensive work on the History and Statistics of the British and Foreign Newspaper Press, which will enter largely and more in detail upon these various matters.

cussion, whether fettered, or not, by fiscal and legal restrictions, typography, price, antiquity, &c., would form a curious index to the civilization, commercial prosperity, and literary taste and talent of the various nations of the world. Even as a bare index for reference to authors, advertisers, and politicians—setting aside its statistical importance—it would not be without its advantages. The history, too, of Newspapers is intimately interwoven with the historical annals of every country, exemplifying the progress of literature and science, and throwing much light upon the state of society and the philosophy of the times in which they were published. It is therefore surprising that the Newspaper Press has not yet found its historian. A few casual papers, in magazines, concerning portions only of the subject, and written rather with a view to amuse than to instruct, are all that have ever yet appeared. The subject, as a whole, remains untouched, and is untrodden ground for any adventurous mind to examine and explore. It is indeed a vast field, which, from the importance of its various relations, can scarcely be grasped by any single individual, without the co-operation of other parties, and the contemporaneous assistance of those literary societies which every principal continental town now possesses.

In England, at the time of the reduction of the stamp on newspapers to one penny, the subject of the press was necessarily thrust prominently before the public eye; but the attention it arrested was momentary and fleeting, and after the object for which it had been agitated was attained, and a few ably-written articles had appeared, entering somewhat more minutely than heretofore into the statistics of the London and provincial press, the matter dropped once more into comparative oblivion. The only existing index to the press of Great Britain is the meagre broad sheet published occasionally by some of the London newspaper agents, which is generally very imperfect. As to the press of other countries, little or nothing is known. Some occasional traveller, when he publishes his observations on men and manners, may now and then incidentally allude to the newspapers of the countries which he visits, but few take any trouble to obtain information on this head that may be depended upon, or consulted with advantage.

In the belief that even a cursory glance at the newspaper press of the world will, in the absence of more extensive information, be acceptable to the members of the Statistical Society of London, we shall proceed to lay before them an outline of the subject, to the extent which our information will permit.

France, America, England, and Germany, are the countries in which newspapers flourish in the greatest number. Our present limits will not permit us to enter into any minute particulars; but we shall pass in review the press of different countries, and state, where attainable, the progress that has been made by each in this branch of literature during the last half-century.

As in most other questions of importance, the claimants for the honour of the first printed newspaper have been numerous; France, Germany, Italy, and England have severally contested the priority. Until within a very late period, England had established, on what was believed to be conclusive and satisfactory evidence, her title to the disputed honour. “*The English Mercurie*, published by authoritie for the prevention of false Reports,” “imprinted at London by her Highness’ printer, in

1588," of which three or four numbers are preserved in the British Museum, was supposed to be a genuine publication.

The claim, however, has recently,* upon evidence which cannot be gainsaid, been found to be untenable, and the merit of priority in the publication of printed newspapers, like the authorship of the Letters of Junius, will probably ever remain undecided, a fruitful field for debate and disputation.

The United Kingdom.—London, as the capital, and most populous city of the British Isles, has always been the centre from which the largest number, and the most influential papers have emanated. When we look back to the sources of information possessed by our forefathers, scarcely two centuries ago, we are astonished at the inferiority of the channels of intelligence of those days. In 1696, we are informed that there were but 9 newspapers published in London, all of them appearing at weekly intervals. In 1709 the number of papers in London had increased to 18, of which only one was published daily. In 1724 the number was 3 daily, 6 weekly, 7 three times a week, "3 half-penny Posts," and the *London Gazette*, twice a week.

The following Table will shew their subsequent progression:—

YEARS.	Number of Newspapers Published in				
	London.	England and Wales, and British Islands.	Scotland.	Ireland.	Total.
1782	18	50	8	3	79
1792	42	70	14	..	..
1795	38	72	13	35	158
1809	63	93	24	37	217
1815	55	122	26	49	252
1830	54	154	36	60	304
1833	55	183	46	75	369
1836	71	194	54	78	397
1837	85	237	65	71	458
1838	88	224	56	77	445
1839	124†	237	66	89	516
1840	109†	224	70	90	493

In 1792 there were in London 13 daily and 20 semi-weekly and weekly papers. In 1795 there were 14 daily, 10 three times a week, 2 twice a week, and 12 weekly. The amount of revenue which they yielded to government in 1788 was 129,000*l*. In 1790 the number of copies of papers printed, was 14,035,639. From August 1791 to August 1792, the number printed was 14,794,193, which yielded to government 118,498*l*. The number in the following year, ended August 1793, was 17,073,621, which produced 142,280*l*. In 1824 the number of copies of newspapers published weekly, was about 500,000, or 26,000,000 in the year.

* In a letter to Antonio Panizzi, Esq., Keeper of the Printed Books in the British Museum, by Thomas Watts, 1839.

† These are computed from the Stamp Returns for the last quarter of the year, and include several literary journals and price currents, which are not strictly newspapers; about 90 or 100 may be fairly considered newspapers.

In 1836 (year ended 15th September), when the Stamp duty was 4*d.*, the total number of stamps issued for the United Kingdom was 35,576,056. In 1839 (ending at the same period), the total number of 1*d.* stamps issued, was as follows :—

London	29,127,583
English provincial papers	19,905,801
<hr/>	
England and Wales . .	49,033,384
Scotland	3,974,444
Ireland	5,509,034
<hr/>	
Total	58,516,862
<hr/>	

The consumption of stamps has therefore increased 64 per cent., or nearly two-thirds, since the reduction of the duty. In London there are about 100 different newspapers published, but the number varies continually, as many start into existence and are continued only for a few weeks: some have been established for nearly a century; others from 50 to 60 years. The oldest existing London papers are the *English Chronicle*, or *White-hall Evening Post*, which was commenced in 1747; the *St. James's Chronicle*, 1761; the *Morning Chronicle*, 1769.

The oldest existing English provincial papers are the *Lincoln Mercury*, published at Stamford, 1695; *York Courant*, 1700; *Kentish Gazette*, 1703; *Worcester Journal*, 1709; *Newcastle Courant*, 1711; *Northampton Mercury*, 1720; *Gloucester Journal*, 1720; *Reading Mercury*, 1722; *Chester Courant*, 1733; *Ipswich Journal*, 1737; *Birmingham Gazette*, 1741; *Bath Journal*, 1742; *Derby Mercury*, 1742; all of which have a large circulation, and are highly respectable journals. Besides these there are not more than a dozen that date back earlier than the commencement of the present century.

The oldest paper in Ireland appears to be the *Belfast News-Letter*, which was commenced the 1st of September, 1737. Next to this in antiquity rank the *Limerick Chronicle*, 1744; the Dublin papers, the *News-Letter*, and *Freeman's Journal*, 1765; *Waterford Chronicle*, 1766; *Dublin Evening Post*, 1774. All the other papers are of modern origin.

In Scotland, the *Caledonian Mercury*, Edinburgh, professes to be the oldest existing paper, dating from 1660, but this is not quite correct. The paper at present published under that name is not the original *Mercurius Caledonius*, and was only commenced in 1720, so that it has many seniors—for instance, the *Edinburgh Evening Courant*, 1705. Out of Edinburgh, the oldest papers are the *Aberdeen Journal*, January 1748; *Glasgow Courier*, 1st September, 1791; and *Kelso Mail*, 1796.

The following table contains a list of the number and circulation of newspapers published in each county of the United Kingdom, in the year 1839, with the population of each county at the last census in 1831; but as the circulation of the several papers is not wholly confined to the counties in which they are published, no important inferences can be drawn from a comparison of it with the number of the population.

Number and Circulation of Newspapers in each County, January, 1840.

Counties.	Population in 1831.	No.	Circulation.	Counties.	Population in 1831.	No.	Circulation.
ENGLAND.				SCOTLAND.			
Bedford . . .	95,483	1	24,125	Aberdeen . . .	177,651	3	262,000
Berks . . .	145,389	4	250,300	Ayr . . .	145,055	4	153,750
Bucks . . .	146,529	4	97,750	Caithness . . .	34,529	2	40,500
Cambridge . . .	143,955	4	215,190	Dumfries . . .	73,770	4	230,000
Chester . . .	334,391	6	315,874	Edinburgh . . .	219,592	15	1,719,375
Cornwall . . .	300,988	5	207,626	Elgin . . .	34,231	2	34,500
Cumberland . . .	169,681	5	253,280	Fife . . .	128,839	2	71,000
Derby . . .	237,170	5	202,800	Forfar . . .	139,606	7	236,985
Devon . . .	494,478	12	624,175	Haddington . . .	36,145	2	1,052
Dorset . . .	159,252	3	184,500	Inverness . . .	94,797	3	121,200
Durham . . .	253,910	7	368,050	Lanark . . .	316,819	13	1,119,905
Essex . . .	317,507	5	301,350	Perth . . .	142,894	4	118,780
Gloucester . . .	387,019	14	897,000	Renfrew . . .	133,443	2	95,500
Hants . . .	314,280	6	379,000	Roxburgh . . .	43,663	2	77,000
Hereford . . .	111,211	3	209,100	Shetland† . . .	29,392	1	10,550
Hertford . . .	143,341	2	81,000	Stirling . . .	72,621	2	84,500
Huntingdon . . .	53,192	1*	54,000				
Kent . . .	479,155	15	458,975	IRELAND.			
Lancaster . . .	1,336,854	27†	3,042,838	CONNAUGHT.			
Leicester . . .	197,003	6	206,500	Galway . . .	414,684	4	39,000
Lincoln . . .	317,465	5	572,025	Mayo . . .	366,328	4	101,000
Monmouth . . .	98,130	2	138,500	Roscommon . . .	249,613	2	14,667
Norfolk . . .	390,054	2	274,500	Sligo . . .	171,765	2	26,575
Northampton . . .	179,336	2	185,000	MUNSTER.			
Northumberland . . .	222,912	7	785,000	Clare . . .	258,322	1	9,500
Nottingham . . .	225,327	4	258,000	Cork . . .	810,732	4	495,500
Oxford . . .	152,156	3	251,500	Kerry . . .	263,126	2	22,750
Salop . . .	222,938	5	300,000	Limerick . . .	315,355	3	253,525
Somerset . . .	404,200	9	342,550	Tipperary . . .	402,563	4	115,900
Stafford . . .	410,512	5	443,575	Waterford . . .	177,054	4	103,850
Suffolk . . .	296,317	6	368,000	ULSTER.			
Surrey . . .	486,334	1	26,000	Antrim . . .	325,615	11	658,400
Sussex . . .	272,340	7	396,025	Donegal . . .	289,149	2	15,730
Warwick . . .	336,610	9	896,500	Down . . .	353,012	4	227,400
Westmoreland . . .	55,041	2	60,000	Fermanagh . . .	149,763	3	27,900
Wilts . . .	240,156	4	272,500	Londonderry . . .	222,012	3	155,000
Worcester . . .	211,365	6	424,175	Monaghan . . .	195,536	1	17,500
York . . .	1,335,997	29	4,236,713	LEINSTER.			
WALES.				Carlow . . .	81,988	3	33,350
Brecon . . .	47,763	1	35,000	Dublin . . .	380,167	23	3,153,481
Carmarthen . . .	100,655	2	77,000	Kilkenny . . .	193,686	2	50,000
Carnarvon . . .	65,573	2	60,400	Longford . . .	112,558	1	8,000
Flint . . .	60,012	1	6,000	Louth . . .	124,846	3	62,362
Glamorgan . . .	126,612	2	136,500	Queen's County . . .	145,851	1	37,900
Merioneth . . .	35,609	1	20,000	Westmeath . . .	136,872	2	14,944
				Wexford . . .	182,713	2	65,500

* This paper, though called the "Huntingdon Gazette," is published in Cambridge-shire.

† Exclusive of the "Anti-Corn Law Circular," with 90,925 stamps.

‡ Published in London, but now discontinued.

We cannot at present enter further into the statistics of the Provincial press, as this would carry us too much into detail. Suffice it therefore to observe, that in every county in England newspapers are printed, with two exceptions, *viz.*, Huntingdon and Rutland; the small size and population of which, with the unimportance of their chief towns, will account for the deficiency. The circumstance of there being only one paper* published in Surrey, is owing to its proximity to London, which enables it to receive intelligence without delay from the metropolitan papers. In Wales, six counties, *viz.*, Anglesea, Cardigan, Denbigh, Montgomery, Pembroke, and Radnor, publish no papers. In Scotland, 15 out of the thirty-three counties publish no papers; *viz.*, Argyle, Banff, Berwick, Bute, Clackmannan, Dumbarton, Kincardine, Kinross, Kirkcudbright, Linlithgow, Nairn, Peebles, Ross, Selkirk, and Sutherland. In Ireland, 8 out of the thirty-two counties publish none; *viz.*, Leitrim, Tyrone, Cavan, Armagh, Kildare, Meath, King's County, and Wicklow.

In England there are no daily papers published out of London, and only in Liverpool and Manchester do papers appear more frequently than once a week. In Scotland and Ireland, on the contrary, at Edinburgh, Glasgow, Greenock, and Kelso; Dublin, Belfast, Ennis, Clonmel, Galway, Cork, Drogheda, Tralee, Kilkenny, Limerick, Mayo, Newry, Tipperary, Waterford, and Wexford, many papers appear two and three times a week.

Out of all the provincial papers of the United Kingdom, there are not more than six or eight which abstain from political discussion; and these exceptions are, for the most part, sheets exclusively devoted to commercial matters.

In the Channel Islands some very respectable papers are published; the principal of which, in Jersey and Guernsey, appear twice a week. There are 4 papers in Guernsey, 9 in Jersey, and 5 in the Isle of Man; all unstamped, and free from taxation.

It would be foreign to our present purpose to notice the different Acts of Parliament which have been passed to regulate the stamp and advertisement duties, the laws of libel, and other matters of fiscal and judicial regulation in Great Britain; our object in this article is principally to give a *resumé*, or passing glance at the Periodical Literature of the different countries of the globe. We shall therefore pass on to that of France.

France.—The origin of Journalism in France has been generally, but erroneously, attributed to a physician named Theophrastus Renaudot, who, in the year 1631, first collected news in fugitive sheets, for the purpose of amusing his patients. He obtained an exclusive privilege for this kind of publication, in 1634-5. But as far back as 1605, under Henri IV., a journal, called the *Mercure de France*, appeared regularly, and was published by Richer, brothers, booksellers, of Paris. They carried it on till 1635, when the above-mentioned Dr. Renaudot took it up, and carried it on till 1644. Messrs. Freselin and La Brière continued it till 1672; and it then assumed the name of *Mercure Galant*, which it retained until 1710, when it was called the *Garde Meuble du Parnasse*. In 1714 it resumed its old name of *Mercure de France*; and in 1716 took that of *Nouveau Mercure*; but in 1721 resumed once more its original appellation, and retained it till the Revolution. It forms a collection of nearly 1,000 volumes, and is more what is now

* This paper is now discontinued.

known by the name of a magazine or literary periodical, than a political paper. It contained recitals of curious circumstances and events occurring in all parts of the world.*

Until the Revolution, the newspapers of France were so completely controlled or guided by the Government, that nothing worthy of observation appears in the monotonous character which they present. The total number of journals and periodicals in Paris, in 1779, was 35.

The number of journals published there immediately before the Revolution was 169, of which 17 were political, and 152 of a literary, scientific, or religious character. The number of provincial journals at that date was between 70 and 80.

The proprietors of newspapers in France are obliged by law to deposit a sum as "caution money," equal to the maximum penalty to which they would become liable by an infringement of the laws of the press; and a journal is not allowed to re-appear, subsequent to any penalty, until this sum has been replaced. Imprisonment for various terms is superadded in all cases of infringement of the law.

Paris, with a population of about 1,000,000, has more than 27 daily papers, the average sale of which exceeds 90,000 copies per diem; while London, with a population of more than 1,500,000, has only 9 daily papers, with a sale of about 45,000 per diem. This difference may, in some measure, be attributable to the greater number of weekly and semi-weekly newspapers in London; but perhaps still more to the greater size of the English newspapers, and to the more comprehensive nature of their contents.

In 1822 there were 86 journals published in the capital; in the beginning of 1827, the number had increased to 162. In 1829, there were printed in Paris 11 daily newspapers, of which upwards of 60,000 copies were circulated. The number of literary and scientific papers printed daily, was 11; and there were also 6 daily papers, which contained only advertisements; so that the total number of papers in Paris at that period was 28. Besides these, there were 32 periodicals which appeared at different periods, from twice a week to once a month.

The following is a view of the newspapers published in France in 1832:—

Daily Newspapers in Paris	34	} 343
Other Journals in Paris	136	
Newspapers out of Paris	173	

Of the provincial newspapers, 30 were published once a week; 46 twice a week; 36 three times a week; 12 every other day; 1 four times a week; 1 five times a week; 9 six times a week; 10 daily; and 28 at periods not stated.

The total number of periodical journals published in France in 1837, was estimated at 776; of which 326 belonged to Paris. From an estimate made in 1838 it appeared, that of the departmental journals 52 were without any political opinion (a thing very rare in Great Britain), 40 supported the government, 47 were opposition, 25 were legitimist, and 4 or 5 were doctrinaire.

The following facts as to the circulation of French newspapers are abstracted from official accounts, published by the post-office.

* Dictionnaire Historique de Paris et ses Environs, par Hurlant et Magny, 4 vols. 8vo., 1779, vol. iii., p. 666.

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The conveyance of journals and printed books rose gradually from 1830, when they were 39,946,875,—of which 32,334,280 were sent from Paris,—to 1833, when they amounted to 50,853,351,—of which 39,255,875 were sent from Paris. But in 1834, they fell again to 49,286,000; increased slightly in 1835; but in 1836, were again reduced to 46,250,030. The diminution was principally in the departmental journals, which from 11,157,000 in 1834, sunk in 1836, to 7,844,490. In 1838, the total number amounted to 48,211,150; of which 38,260,110 were issued from Paris, 9,269,090 from the departments, and 681,950 circulated within the post-office district in which they were published. The average daily number thus circulated by post was 109,443 in 1830, and 132,086 in 1838. In 1821, it was only 76,240. This will be more distinctly shewn in the following table.

Journals, Periodicals and Printed Works of all kinds, sent by the Post in France.

Years.	Sent from Paris.	Issued from the Departments.	Circulated in the same rural Post District in which they were published.	Total.	Daily Average.
1821	23,209,773	4,618,061	..	27,827,834	76,240
1830	32,334,280	7,422,540	190,050	39,946,875	109,443
1831	36,499,000	8,883,425	324,442	45,706,867	125,124
1832	36,928,650	10,117,025	352,216	47,397,891	129,857
1833	39,255,875	11,170,925	426,551	50,853,351	139,320
1834	37,644,000	11,157,000	485,000	49,286,000	136,905
1835	38,778,675	10,093,250	433,750	49,305,675	136,960
1836	37,871,190	7,844,490	534,350	46,250,030	126,712
1837	40,535,247	9,198,048	643,000	50,376,295	138,017
1838	38,260,110	9,269,090	681,950	48,211,150	132,086

From a careful review of *Bottin's Almanach du Commerce*, for January 1840, we arrive at the following details of the Parisian and Provincial press.

Paris Daily Papers.

Political morning journals	20	} 130
Literary and judicial ditto	9	
Political evening journals	3	
Journals of various kinds, published weekly, or at shorter intervals than once a month . .	70	
Commercial and industrial journals, advertising sheets, price currents, &c.	28	

Besides the above, the following monthly journals are published:—

Devoted to Bibliography and Typography . .	4	} 142
„ Jurisprudence and Administration . .	36	
„ Religion	7	
„ Freemasonry	1	
„ Military Art	6	
„ Medicine	14	
„ Music	6	
„ Fashion	5	
„ Education	12	
„ Science	12	
„ Literature	12	
„ Rural Economy	15	
„ Commerce and Industry	12	

The following table of the provincial journals is probably somewhat under the real number, as it is not the object of the publication from which the estimate is made to pay any peculiar degree of attention to obtaining correct returns of all the journals published; and there are several towns whence no return has been made of the journals.

French Provincial Papers, in December 1840.

Departments.		Population.	Political Journals.	Advertising Journals, &c.	Departments.		Population.	Political Journals.	Advertising Journals, &c.
1	Ain	346,188	3	2	46	Lot-et-Garonne .	346,400	2	.
2	Aisne	527,095	9	1	47	Lozère	141,733	1	.
3	Allier	309,270	3	.	48	Maine-et-Loire .	477,270	6	2
4	Alpes (Basses) .	159,045	1	1	49	Manche	594,382	8	3
5	Alpes (Hautes) .	131,162	1	1	50	Marne	345,245	4	4
6	Ardèche	353,752	2	.	51	Marne (Haute) .	255,969	2	4
7	Ardenne	306,861	3	.	52	Mayenne	361,765	1	1
8	Ariège	260,536	.	1	53	Meurthe	424,366	4	2
9	Aube	253,870	3	2	54	Meuse	317,701	4	2
10	Aude	281,088	1	1	55	Morbihan	449,743	2	2
11	Aveyron	370,951	2	.	56	Moselle	427,250	3	2
12	Bouches-du-Rhône	362,325	10	1	57	Nièvre	297,550	2	2
13	Calvados	501,775	9	6	58	Nord	1,026,417	20	5
14	Cantal	262,117	2	2	59	Oise	398,641	3	3
15	Charente	365,126	3	.	60	Orne	443,688	1	2
16	„ Inférieure	449,649	5	2	61	Pas de Calais . .	664,654	12	2
17	Cher	276,853	4	2	62	Puy-de-Dôme . .	589,438	6	1
18	Corrèze	302,433	6	.	63	Pyrénées (Basses)	446,398	5	.
19	Corse	207,889	2	1	64	„ (Hautes)	244,170	1	.
20	Côte-d'Or	385,624	5	1	65	„ Orientales	164,325	1	1
21	Côtes-du-Nord . .	605,563	4	1	66	Rhin (Bas) . . .	561,859	4	2
22	Creuse	276,234	3	1	67	„ (Haut)	447,019	4	4
23	Dordogne	487,502	5	2	68	Rhône	482,024	9	3
24	Doubs	276,274	4	2	69	Saône (Haute) . .	343,298	1	2
25	Drôme	305,499	4	1	70	Saône-et-Loire . .	538,507	3	2
26	Eure	424,762	4	2	71	Sarthe	466,888	2	1
27	Eure-et-Loir . . .	235,053	3	2	72	Seine (Paris) . .	1,106,891	.	.
28	Finistère	546,955	2	2	73	Seine-et-Marne . .	325,881	3	5
29	Gard	366,259	4	2	74	Seine-et-Oise . . .	449,582	2	4
30	Garonne-Haute . .	454,727	5	3	75	Seine-Inférieure . .	720,525	24	10
31	Gers	312,882	4	1	76	Sèvres (Deux) . .	304,105	4	1
32	Gironde	555,809	13	6	77	Somme	552,706	7	1
33	Hérault	357,846	1	1	78	Tarn	346,614	2	1
34	Ille-et-Vilaine . .	547,249	4	.	79	Tarn-et-Garonne .	242,184	1	1
35	Indre	257,350	2	2	80	Var	323,404	4	2
36	Indre-et-Loire . .	304,271	2	.	81	Vaucluse	246,071	3	1
37	Isère	573,645	3	1	82	Vendée	341,312	.	1
38	Jura	315,355	2	1	83	Vienne	288,002	1	1
39	Landes	284,918	3	.	84	Vienne (Haute) . .	293,011	3	1
40	Loir-et-Cher . . .	244,043	3	1	85	Vosges	411,034	3	3
41	Loire	412,497	3	1	86	Yonne	355,237	3	3
42	Loire (Haute) . .	295,384	4	1					
43	Loire-Inférieure .	470,768	4	6				336	153
44	Loiret	316,189	3	3					
45	Lot	287,003	2	.		Total . . . . .	.	489	

The second column embraces *Journals des Affiches et Annonces*, commercial sheets, price-currents, bulletins administratifs, scientific and literary journals, &c. Every department publishes also an *Annuaire*, and commercial almanack, which are not included,

The United States of America.—No other country has so many newspapers and periodical journals as the United States. Indeed, the Americans have more newspapers than the whole 233 millions of inhabitants of Europe. Nothing in America is, perhaps, more striking than the rapid and general diffusion of information throughout the community by means of newspapers, the aggregate daily circulation of which is immense, and very far exceeds that of Great Britain. But most of these publications are of an entirely ephemeral character, and very feebly supported; and but few of them possess any considerable literary merit. The first American press was set up at Cambridge, in Massachusetts, as early as 1638; in 1700, there were but 4 presses in the colonies; in 1720, 7 newspapers; in the United States, in 1800, 300 presses; and in 1830, about 1,200, since which time the number has much increased. The first newspaper printed in the British colonies in America, was published at Boston, in 1704, entitled the *Boston News-Letter*, which was continued till 1774. This is supposed to have been the first newspaper published on this continent, though it is believed by some that gazettes were printed at an earlier date at Mexico. The *Boston Gazette*, the second American newspaper, made its appearance in 1719, and the same year, but one day later, the *American Weekly Messenger*, at Philadelphia. The first *New York Gazette* was published in the city of New York, in 1725; the first newspaper in the Carolinas, at Charleston, in 1731-2; the first *Rhode Island Gazette*, in Newport, in 1732; and the first *Virginia Gazette*, at Williamsburg, in 1736. At present there is hardly a petty town in any of the States without its newspaper.

The increase of newspapers in the United States has been a good deal more rapid than in England, in consequence partly, no doubt, of the greater increase of population in the Union; but, more probably, on account of their freedom from taxation, and of the violence of party contests.

In 1775, there were published in the Colonies (now the United States) 37 newspapers; in 1801, 203; in 1810, the number was 308; or, according to some authorities, 364; in 1823, 598; and in 1828, 802. Besides the newspapers, more than 400 periodicals are annually published.

No sufficient data exist for computing, with any degree of accuracy, the number of copies of newspapers at present annually circulated in the United States, but the number does not probably fall far short of 100,000,000, as stated in the American Almanack for 1840. The progressive increase has been computed as follows:—Dr. Miller's estimate in 1801, gives at least 12,000,000 as the number of copies annually circulated. Mr. Thompson, in 1810, computed the number at 22,500,000, and the American Almanack, in 1834, at 70 or 80,000,000. The total number of papers issued in Great Britain and Ireland, in the year 1839, was only 58,516,000, so that making allowance for the difference of population, the number of papers published in the United States, in proportion to the population, is more than twice as great as in England.

A few years ago, it was shewn by a very able writer in *The Scotsman*, that the number of newspapers in the United States of America was, in proportion to the population, five times as great as in the British Isles; and the same writer was of opinion that but for the dispersion

of the inhabitants, the United States would, in all probability, have a proportion of newspapers eight or ten times as great as in the British Isles, an estimate the accuracy of which is confirmed by the fact, that in the State of New York, with a population of 2,000,000, which is equal to one-twelfth of the population of the British Isles, the number of papers is more than two-thirds of the entire number published in the whole of the United Kingdom. We are not, however, to estimate the value or influence of newspaper literature by its quantity alone, but must have regard also to its quality. From the latter, indeed, it derives its chief value; and in whatever degree the Americans may exceed us in the number, they certainly are immeasurably below us in the quality of their newspapers. The American style of writing is florid to excess; journals and periodicals are filled *ad nauseam* with high-flown figures and dazzling ornaments. An American writer cannot describe the simplest affair without a flourish of trumpets; and their periodical press is, almost without an exception, characterized by redundancy of expression, turgidity of diction, and an extravagance of style and sentiment.

From the immense number of newspapers in the United States, it results that the number of subscribers to each is limited, 2,000 being considered a respectable list; and therefore no single paper is able to unite the talent of many able men, as is usually the case in France and England.

The annexed table (*see* page 122) exhibits the date at which the first newspaper was printed in the several States, and the number printed in each, at five distinct periods, commencing with the Revolution.

In drawing a comparison between the newspapers of the three freest countries, France, England, and the United States, we find that those of the last country are the most numerous, while some of the French papers have the largest subscription; and the whole establishment of a first-rate London paper is the most complete. The daily papers of New York, Boston, Philadelphia, and the other principal towns in the United States, cost about two guineas per annum; the Paris daily papers, from 34s. to 67s. per annum; the London daily papers, about 6*l.* 10s. or 7*l.* per annum.

In the United States there were 27 daily papers published in 1810; 50 in 1830, two-thirds of which were supposed to be yielding fair profits; 90 in 1834; and there are now, probably, about 100 in the different States, 22 of which are issued in the State of New York.

As there is no duty on advertisements, advertising is carried on to a large extent in the American papers, to the great benefit of trade. The 13 New York daily papers contain more advertisements than all the newspapers of England and Ireland. One of the ablest of the North American newspapers, the *New York Courier and Enquirer*, frequently contains above 1,200 advertisements; while the *Times*, one of our largest advertising journals, scarcely ever contains more than 800.*

* Within the last few weeks, the *Times* has commenced a system of publishing, at uncertain intervals, a quadruple sheet. In that of the 5th June, there were as many as 1,493 advertisements; and in two others, subsequently published, there was about the same number.

STATES.	First Newspaper Established.	Number of Newspapers.*				
		1775	1810	1828	1834	1839
Maine	1786	..	8	29	51	41
New Hampshire . .	1756	1	12	17	27	26
Vermont	1781	..	14	21	26	31
Massachusetts . .	1704	7	24 [†]	78	108	124
Rhode Island . .	1732	2	7	14	16	14
Connecticut . . .	1755	4	11	33	31	31
New York	1725	4	66	161	267	274
New Jersey . . .	1777	..	8	22	35	39
Pennsylvania . .	1719	9	71	185	220	253
Delaware	1761	..	2	4	4	3
Maryland	1728	2	21	37	32	48
Virginia	1736	2	23	34	40	52
North Carolina . .	1755	2	10	20	22	30
South „	1731	3	10	16	19	20
Georgia	1763	1	13	18	29	33
Alabama . . . .	..	..	..	10	15	34
Mississippi . . .	..	..	4	6	13	36
Louisiana . . . .	..	..	10	9	31	26
Tennessee	1791	..	6	8	26	50
Kentucky	1786	..	17	23	25	31
Ohio	1795	..	14	66	140	164
Indiana	1809	..	1	17	25	69
Illinois . . . .	..	..	..	4	15	33
Missouri . . . .	..	..	1	5	15	25
District of Columbia	1800	..	6	9	9	16
Florida Territory .	..	..	..	2	5	9
Mackinnon „	..	..	..	1	2	..
Arkansas „	..	..	..	1	2	4
Iowa „	..	..	..	..	..	3
Wisconsin „	..	..	..	..	..	5
Michigan „	..	..	..	1	7	31
Total . .	..	37	359	851	1,272	1,555

British North American Colonies.—Canada.—Printing was introduced into Canada soon after the organization of the government under the English, and the first newspaper published in that country was the *Quebec Gazette*, which appeared in January 1765. The *Montreal Gazette*, the second paper, was first published in 1775. In 1810, there were 5 newspapers in Lower Canada, and one in Upper Canada, at York, now called Toronto. In 1830, there were 51 papers in the British North American possessions.

In Lower Canada there were published at Quebec, 3 semi-weekly, and 1 weekly; at Three Rivers, 1 weekly; at Montreal, 5 semi-weekly, and 2 weekly; and at Stanstead, 1 weekly. In Upper Canada, 6 at York

* The column for 1828 includes other periodicals, as well as newspapers; the latter may be stated at 802. The same remark applies to the column for 1839, which is taken from returns made to the United States' post-office department, of the number of newspapers, magazines, and periodicals, published in the United States on the 1st of July, 1839; the numbers in the column for 1834, assigned to Pennsylvania, Virginia, Ohio, Indiana, and Illinois, are chiefly by estimate, the exact numbers not having been ascertained. The estimate is stated to have been probably below the real numbers.

† According to some authorities 34.

or Toronto, 5 at Kingston; 3 at Niagara; 2 at Brockville; and 1 each at Hamilton, Perth, and St. Catherine's; in all, 19. In 1834, this number had increased to 34. At present, with a population of 400,000, there are about 28 newspapers in the province.

The British population of Lower Canada, although numerically inferior to the French, as 1 to 4, support treble the number of newspapers. The census of 1831 gave the entire population as 511,917. Out of this number, the proportion of French inhabitants may be estimated at 400,000, who are contented with 3 newspapers, not one of which is daily, but 2 tri-weekly, and 1 weekly. The British in Lower Canada have 8 newspapers, besides monthly periodicals, although they perhaps do not exceed 100,000 in number. The British have also literary societies, public libraries, museums, &c., while the French have nothing of the same description.

The weekly issues of the British press of Lower Canada are equal to 29,000; those of the French press to 8,000.

This comparison furnishes evidence of the superior intelligence of the British population over the French of Lower Canada, if public journals be taken as a criterion. The supply of this article never exceeds the demand. The comparison between the British and other nations which have established colonies, is the same all over the globe.

The newspapers of Canada call for little comment, they are in general badly printed, and worse edited; and in their typography and arrangement little taste is displayed. The greater proportion of those of Lower Canada are printed partly in French, and partly in English.

Newfoundland.—The island of Newfoundland supports 9 newspapers, of which 7 are published at St. John's, 1 at Harbour Grace, and 1 at Carbonear. Several new papers are announced to appear. In no small community, perhaps, does party feeling run so high as in this island; and hence arises the number of papers, as compared with the population, which, though very fluctuating, was estimated in 1837 at 75,000. The oldest of the existing papers is the *Royal Gazette*, commenced in 1805. The *Public Ledger* was started in 1822; all the others are of recent origin, for in the year 1830, there were but four papers published in the island. Two of the papers appear twice a week, and the others are issued weekly.

Bermuda.—Early in 1784, a printing-office was established in Bermuda, by J. Stockdale, brother to the late printer to the House of Commons, who in July of that year issued the first paper ever printed in Bermuda, entitled the *Bermuda Gazette*. It passed into various hands, and was continued for a long period. There are now two weekly papers issued here; and since Colonel Reid has been the governor of the island, they have contained many interesting reports and papers connected with "The Theory of Storms."

Bahamas.—The *Royal Bahama Gazette* was established at Nassau, New Providence, soon after the peace was concluded on the American continent in 1783. The island now supports two newspapers, and both are issued twice a week.

New Brunswick.—Newspapers were not printed in New Brunswick until the year 1783; two or three were then issued from the presses of those printers who, during the war, were with the British army in New York, &c.; but who, when peace was established, left the United States

and settled at St. John's, the chief town. In 1830, there were 7 weekly newspapers in the province; 4 at St. John's, 1 at Fredericton, 1 at St. Andrew's, and 1 at Miramichi. By the close of 1837, there had been added to this number 3 more, *viz.*, 2 at St. John's, and 1 at Woodstock.

In the commencement of the present year the number had considerably increased, there being 9 published at St. John's, 2 at Fredericton, 1 at St. Andrew's, 1 at Miramichi, and 1 at Woodstock. The New Brunswick papers are of a more useful and commercial character than those of the sister province of Nova Scotia, and interfere less with political matters.

Prince Edward's Island.—Eleven years after the introduction of printing into New Brunswick, it found its way into Prince Edward's Island. In 1795 a paper was commenced at Charlotte-town, called the *St. John's Miscellany*. This paper was soon discontinued, and no further newspaper-printing was attempted for ten years afterwards. Since that period there have been several papers started, and two are now published, the oldest of which dates from 1823.

Nova Scotia.—Printing was first introduced into Nova Scotia in 1751, a period of 24 years before it was commenced in Canada; and 33 years before it found its way into New Brunswick. The early prints of this province were of a very inferior description, both in point of merit and workmanship; but as soon as intelligence began to dispel the mists of ignorance and prejudice, literature was viewed in its proper light, and consequently newspapers, as a means of its advancement, became more popular. Soon after the settlement of the town of Halifax, and printing had been introduced, a newspaper was published under the title of the *Halifax Gazette*. It first appeared in January, 1751, and was printed weekly on half a sheet of foolscap paper, by John Bushell. The circulation of the *Gazette* was in a great measure confined to the town, which was then a mere garrison. After a trial of some months, its publication was for a long time suspended, and although afterwards revived, it was not brought out at regular intervals until about the autumn of 1760, which was soon after Bushell died. Anthony Henry commenced the republication of this paper in the following year, and he continued to print it in a very indifferent manner, and with few customers, until 1765, when the British Stamp Act was extended to this colony. It was then issued on a whole sheet, about 18 inches square, but not more than 70 copies were printed weekly, and the subscribers did not amount to that number. A second paper was brought out in 1766, which was carried on for four years. No other papers were published in Nova Scotia until the war commenced. In 1810 we find 3 papers at Halifax; in 1830 the number had increased to 6; 5 published at Halifax, and 1 provincial paper at Pictou. In January, 1838, the number of papers issued in the province was 11; 8 at Halifax, 1 at Lunenburg, 1 at Yarmouth, and 1 at Pictou. A new paper has also been started at Sydney, in the island of Cape Breton.

The rapid communication between Halifax and England, by means of the Cunard mail steamers, has given quite an impetus to newspapers, and called into being several new journals. The number now issued at Halifax is as many as 12, two or three of which are published three times a week; and there are 3 in the country parts of the province. The price of the Halifax and New Brunswick papers is 15s. per

annum, to which is added a postage charge of 2s. 6d. yearly, when sent by mail. Several of the leading papers circulate between 3,000 and 4,000 copies weekly; but 500 or 600 copies is about the average circulation of the country papers.

Honduras.—In the dependency of Honduras, soon after it was settled, a *Gazette* was published, but it does not appear to have been continued for any time. The *Belize Advertiser* was commenced on the 29th of September, 1838, and seems likely to last. A second weekly paper, under the title of the *Honduras Observer*, was commenced on the 25th November, 1840; but there can hardly be room for two papers here. The population of Honduras does not exceed 4,000, but it is a very thriving and wealthy settlement.

Central America.—The newspapers of British Guiana are not numerous, but they are respectably conducted, notwithstanding the strong party feeling which prevails. The first newspaper published here was the *Berbice Royal Gazette*, by Messrs. Schulz and Volkerts, two Dutchmen, which appeared once a week till 1816, when it was published twice a week. In 1831, the union of the colonies of Berbice and Demerara took place, and this paper lost the government patronage, which was transferred to the other seat of government, Georgetown, where 4 papers are now published; 1 semi-weekly, and 3 on alternate days. The oldest of them dates from 1805. The Berbice paper was discontinued in May, 1840, but another paper has since taken its place.

In French Guiana there are also one or two journals published; and at Surinam, two periodical journals. The Demerara papers circulate from 500 to 800 copies each issue. In the republic of Venezuela 4 weekly newspapers appear, all at the capital, Caraccas; and they are very neatly printed and got up. However small this number of publications may seem, it shews that the taste for reading is on the increase, for six years ago not a paper but the *Gazette* was supported. Political questions are now treated in these journals with great freedom and liberality, and appear to have powerful means of diffusion. They circulate from 800 to 1,500 copies each. The population of Caraccas is, according to McCulloch, 23,000.

At Santa Fe de Bogotá, in the republic of Colombia, 4 newspapers are published. The whole republic had, in 1831, 16 political papers. There are 5 in Guatemala, or Central America.

In the Mexican Confederation a vast number of newspapers are published, all of which furnish much important intelligence towards enlarging our statistical knowledge of Central America. In 1831-2, there were as many as 28 papers published in Mexico, 7 of them in the capital; there are now 9, if not more, *daily* papers published there, as well as several in the departments; together with 5 or 6 semi-weekly, and a great many weekly papers. About a dozen journals are published in the new republic of Texas, 2 of which are daily, and the number is on the increase.

South America.—It is asserted that *Gazettes* were printed in South America before the 17th century; and it is not improbable that such was the case in the cities of Mexico and Lima. Dr. Robertson, in his "History of America," mentions his being furnished with the *Gazeta de Mexico*, for the years 1728, 1729, and 1730, printed in quarto.

In the different republics of Chili, Peru, Bolivia, and the Ecuador,

there are a vast number of papers published, respecting which it is extremely difficult to obtain detailed information; but we may state that six are published at Pernambuco; one or two at Bahia; seven or eight at Rio Janeiro, most of them daily; and the same number at Buenos Ayres, one of which, a weekly paper, has been published in English since 1826.

On the western coast there are papers at Valparaiso, Arequipa, Lima, Quito, and Panama; and there are journals published at Cusco, Rosas, Santiago de Chili, and other towns, many of them daily.

In Chili, which received its first printing press from the United States in 1810, 7 Gazettes were published in 1831.

The West India Islands.—There is not an island in the West Indies which has not two or more newspapers.

Jamaica has 10; of which 2 are daily, and the others weekly and semi-weekly. The oldest Kingston paper dates from 1778, although there is one journal on the north side of the island, which was commenced six years earlier.

The Jamaica papers are thus distributed:—

Kingston, daily	2	Spanish Town, semi-weekly	1
,, tri-weekly	1	Falmouth, weekly	2
,, weekly	2	,, semi-weekly	1
Montego Bay, semi-weekly	1		

The press of Kingston has fluctuated greatly within the last eight or ten years, continual changes having taken place by the discontinuance of old and the establishment of new journals. The newspapers are in general conducted with much ability, and contribute largely to our stock of information regarding the natural productions, statistics, meteorology, &c., of the island; but party spirit, unfortunately, has hitherto run high, and marred the general utility of these publications.

The tax of postage upon newspapers in Jamaica is felt very severely by the proprietors of journals, who are deprived of many subscribers in consequence of their having to charge an additional sum of eight dollars for their papers; as one-half of the whole amount (sixteen dollars per annum) is taken by the post-office for transmitting them to subscribers.

A newspaper was first published at Barbadoes in 1731. There was no other press in the Caribbean Islands for several years subsequent to this period. Barbadoes has now 5 semi-weekly, and 1 tri-weekly newspaper (all of which are published at Bridgetown), in addition to an official weekly Gazette for government notices. The oldest existing paper was commenced about the year 1810 or 1811. It is a singular fact, that two of these papers have been established by the coloured population as their especial organs, one about three years ago, and the other in the present year, and they are supported and conducted entirely by this class. One is edited with much ability by Mr. S. J. Prescod, a gentleman of colour. In Jamaica also one or two of the papers are edited by persons of colour, and espouse the cause and interests of the negro population. Many of the colonial papers are owned by members of the island legislatures.

St. Kitt's, Grenada, Tobago, Antigua, Dominica, and St. Lucia, have each 2 weekly political journals, in addition to the government Gazette in some islands. The oldest paper at St. Kitt's dates from 1813, but a Gazette was published there prior to 1748. The oldest paper at Gre-

nada was commenced as far back as 1742. The oldest Tobago paper has only been established about five years. The oldest paper in Antigua was commenced in 1813, but there was a paper published there in 1748. In Dominica, the oldest appeared in 1825, but the earliest paper in 1765; and in St. Lucia the oldest appeared only in 1837, but there were several journals published previous to that date. St. Vincent has 3 weekly papers, the oldest dating from 1784. At Trinidad there are 2 semi-weekly papers, besides the *Royal Gazette*, which are all of comparatively recent origin, the oldest having only been published fourteen years.

The price of the different West India papers varies considerably, the Kingston daily papers being 1 doubloon (5*l.* 6*s.* 8*d.*) per annum, while the Spanish Town semi-weekly paper is charged nearly the same price. The Barbadoes papers are 6 or 8 dollars. The Antigua, Dominica, and Grenada papers, cost the same. Those of Trinidad and Tobago 12 dollars; and those of St. Vincent, 3*l.* 5*s.* (currency) per annum.

These newspapers are all creditable publications; they are generally published in the English tongue, except in some few instances of colonies ceded by France, in which they are partially printed in the language of that country.

Of the press of the Danish, French, and Spanish West India Islands, we have less detailed information.

At Guadaloupe there are 3 journals published; and 2 at Martinique; 1 each at St. Thomas's and St. Croix, issued semi-weekly. At St. Domingo and Cuba the press is not very prolific, although at Port-au-Prince a daily paper has been published for some time; and at the Havannah several papers appear.

We will now turn back to the continent of Europe, passing first over the most extensive field of newspaper literature there, *viz.*, the Austrian dominions.

Germany.—In Germany newspapers originated in the “*Relations*,” as they were termed, which sprung up at Augsburg and Vienna in 1524, at Ratisbon in 1528, at Dillingen in 1569, and at Nuremberg in 1571, and which appeared in the form of printed letters, but without date, place, or number. The first German newspaper in numbered sheets was printed in 1612. In 1833 there were about 305 journals published throughout the extent of the German States. The journals published in Austria, in 1838, literary and political, amounted to 76, of which 22 appeared at Vienna, 25 at Milan, 10 in Lombardy, 7 at Venice, 5 at Verona, and 7 in Galicia and Hungary. In the beginning of 1840 the number of political journals in the empire was 36, *viz.*, 2 at each of the following places:—Vienna, Agram, Pesth, Baden, Presburg, Limburg, Prague, and Venice; and 1 at Inspruck, Brunn, Gratz, Klagenfurth, Leybach, Lintz, Salzburg, Hermanstadt, Troppau, Como, Milan, Cremona, Mantua, Pavia, Verona, Sara, Trieste, Closen-burg, Cronstadt, and Roveredo: 16 of these journals are published in the German language; 11 in Italian; 1 in Illyrian; 5 in Hungarian; 1 in Polish, 1 in Bohemian, and 1 in Wallachian. There are also 96 non-political journals, of which 24 are published at Vienna, 27 at Milan, and 11 at Prague. The periodical press of Germany is about to be regulated by the promulgation of a general law.

The leading paper of Germany is the *Allgemeine Zeitung* (Universal

Gazette) of Augsburg, which was commenced in 1794 by J. G. Cotta, the celebrated bookseller of Tübingen. The place of publication has alternately been changed from Tübingen to Stuttgart, Ulm, and finally to Augsburg. The cost of German papers to subscribers in England varies from 6 to 8 guineas.

Four or five newspapers are published at Hamburg, 2 or 3 at Oldenburg, 2 at Lübeck, 3 at Amsterdam, and 2 each at Haerlem, Rotterdam, and Bremen, which are merely local and commercial papers, and possess very little interest for foreigners, being principally compilations of the news extracted from foreign journals.

In the kingdom of *Hanover* there were, in 1840, only 4 political journals published, *viz.*, 1 at Hanover, 2 at Hildesheim, and 1 at Emden; 4 official papers are also published for the purpose of receiving the notifications and advertisements of the Courts of Law, public and other authorities, and of private individuals, *viz.*, 1 at Hanover, 1 at Lüneburg, 1 at Stade, and 1 at Aurich. Besides these there appear in several towns of the kingdom *Weekly Advertisers*, relating to purposes of a merely local interest.

In the kingdom of the *Netherlands*, in 1826, there were published in the Dutch language 80 daily and weekly papers, and several in French.

There was a *Gazette* published by authority at Brussels as early as 1757, and an *Amsterdam Gazette* before 1760. In 1833 it was stated in a German paper that there were in the whole of Belgium 62 papers, and in Holland 150.

From a list of the Belgian newspapers for January 1841, obtained from an official source, it appears that there were then 75 journals published in the kingdom. Of these 55 are stated to be printed in the French language, and 18 in the Flemish. They were thus distributed; 21 at Brussels, 7 at Ghent, 4 at Liege, 8 at Antwerp, 5 at Bruges, 3 each at Turnhout, Mons, Namur, and Verviers, and the remainder at other small towns. Of these 24 were published daily, *viz.*, 11 at Brussels, 3 each at Ghent and Antwerp, 2 each at Bruges, Namur, and Verviers, and 1 at Mons. The cost of the daily papers varies from 40 to 60 francs, exclusive of postage.

Prussia.—In 1819 there were 516 presses in Prussia; in 1820, 580; in 1825, 693; of periodical publications of various kinds there were 300 at the end of the year 1827, and the number since then has not very largely increased. Bottin's *Paris Almanack*, in 1834, stated the number of newspapers at 168.

Switzerland.—In 1821, there were 21 journals of various kinds published in Switzerland. In 1824, 11 political papers appeared, of which 7 were in German, 2 in French, and 2 in Italian. In 1829 it was stated that there were 130 presses in Switzerland: Geneva had the greatest number, *viz.*, 18; Zurich 17, Bâle and Aargau 16, Berne and St. Gall 9. The Pays de Vaud published 3 *Gazettes* in French, and Geneva only 1, but it was the best in Switzerland; the canton of Tessin published 2 *Gazettes* in Italian, and Zurich 4, in German. The journals which were published in the other cantons were all in German. *La Chronique Suisse* stated in 1825 that 24 newspapers appeared in the course of the week; 9 were conducted by Catholic editors, and 15 by Protestants. This list does not include 5 fortnightly papers and a number of scientific or literary journals. Ten new papers had been started since 1823.

The *Gazette of St. Gall* publishes the following statement, shewing the increase of printing offices and political publications in that country. In 1817 there were in all Switzerland no more than 54 printing-offices, and 16 periodical journals; in 1830 there were 71 printing-offices and 29 journals; and in 1834 there were 93 of the former and 54 of the latter. The number has not since increased, as will be seen by a reference to the following table of the journals published in the Confederation in 1840. The list was made on the 18th of January.

	Canton.	Population.	No. of Journals.
1	Zurich . . .	231,000	5
2	Berne . . .	380,000	8
3	Lucerne . . .	123,000	3
4	Uri . . .	13,000	1
5	Schwitz . . .	38,000	1
6	Unterwald . .	22,000	.
7	Glaris . . .	30,000	2
8	Zug . . .	15,000	1
9	Fribourg . . .	35,000	.
10	Soleure . . .	63,000	2
11	Bâle-Ville . . .	21,000	2
12	Bâle-Campagne .	33,000	2
13	Schaffhausen . .	32,000	2
14	Appenzell . . .	51,000	2
15	St. Gall . . .	166,000	4
16	Grisons . . .	96,000	3
17	Argovie . . .	186,000	3
18	Thurgovie . . .	84,000	1
19	Tessin . . .	109,000	2
20	Vaud . . .	183,000	2
21	Valais . . .	76,000	2
22	Neuchâtel . . .	57,000	1
23	Genève . . .	56,000	2
	Total . .	2,080,000	51*

Russia.—During a long time all the literary movements of the Russian empire were concentrated in St. Petersburg and Moscow. The provinces contented themselves with reading the productions of those two capitals, but without producing anything themselves. Within the last 3 or 4 years this order of things has been greatly changed. The total number of journals published in Russia, in 1820, according to the *Encyclopædia Londonensis*, was 33. In 1829 the number had increased to 73. The periodical literature in 1833 consisted of 45 journals and newspapers, of which 25 were published in St. Petersburg, 11 in Moscow, 3 in Odessa, 2 in Revel, 3 in Kasan, and 1 in Joursloff; 13 of the non-political publications were devoted to the *Belles Lettres*, and the remaining 27 of the same class to various departments of science. 19 were published under the direction and at the expense of government authorities, *viz.*, 12 daily, and 7 monthly publications. The remainder, consisting of 10 daily publications, and 16 others at various intervals, were private undertakings; some prosecuted by learned

* Or 1 journal to every 40,784 inhabitants.

societies, and others by individuals. To this list must be added 41 periodical works in foreign languages; of which 23 were in German, 5 in French, 4 in Laplandish, 3 in Polish, 2 in English, 1 in Italian, and 3 in other languages.

In 1839 there were about 154 papers and periodical publications. The principal centres whence these emanate, are St. Petersburg, Moscow, Kieff, Kasan, Dorpat, Jaroslaw, Odessa, Wilna, Archangel, Witepsk, Wladimir, Vologda, Jitomir, Woronesk, Viatka, Grodno, Ekaterinoslaw, Kaluga, Rastroma, Minsk, Mittau, Novogorod, &c. These towns consequently are considered as the centres of the intellectual movement in Russia.

The earliest periodical work which appeared in Russia was the Petersburg newspaper, which is still published by the Imperial Academy of the Arts and Sciences. It first came out in Moscow in the year 1703; from 1711 it was published alternately in that city and St. Petersburg, and since 1728 it has invariably been published at the latter place.

The *Gazette* of St. Petersburg is the best of the Russian papers, and circulates 6,000 daily; the *Northern Bee* 3,600, and the other papers from 1,000 to 2,000. The *Moscow Gazette* circulates 8,000 or 9,000, and comes out twice a week.

The influence of the periodical press in Russia is immense, and almost incredible; public opinion is entirely guided by its decisions, particularly in the provinces.

Poland.—In 1827 it was estimated that Russia had gained by the successive dismemberments of Poland, a population of 17,680,000 native Poles, and 5,330,000 Germans and Jews. To meet the literary wants of this population there were only 15 journals, 8 of which were published at Warsaw*, and 7 in the different cities of the kingdom. Courland, Livonia, and Esthonia, contained a population of 1,600,000 inhabitants, of whom only 200,000 were Germans; and yet for these Germans there were 14 journals in their native language, while nearly 18,000,000 of Poles inhabiting so many different provinces had not more than 15 journals. For the Livonians and Esthonians there were 4 journals.

In Independent Poland in 1830, with a population of 107,934, the number of journals published was 5; in Russian Poland, with a population of 15,377,389,—39; in Prussian Poland, with a population of 1,984,124,—1; and in Austrian Poland, with a population of 4,226,969,—4; being 49 journals for a population of 21,696,416.

In Warsaw literature continues to be on the decline. The four daily journals are principally used as vehicles for advertisements; and as politics are very cautiously introduced, they generally fill up what is left, after the daily news and official notices, with tales and anecdotes. In addition to the daily papers there are 10 or 12 small journals, most of which have their particular circle.

Denmark.—The first journal printed in Denmark was in the year 1644. This was soon followed by several others, one of which was in verse! In 1828, 80 periodical works, daily, weekly, monthly, and

* Another authority states that there were 14 journals and 5 political papers published in Warsaw in 1827.

quarterly, were published in this country, 70 of which were in the Danish language; 23 were devoted to politics, and 25 to the sciences.

At the present time there appear about 54 daily and weekly publications, more than half of which are published in Copenhagen; and there are also 30 monthly and other periodical works, the greater part of which are published in the capital. To their late monarch, Frederick VI., the Danes are indebted for the liberty of the press among other privileges.

Norway and Sweden.—The supply of newspapers in Norway is abundant, as the press in that country is perfectly free, and no tax of any kind is levied on it. Christiania alone boasts of not less than 8 journals, which are very impartially conducted, and said to be much read. There are about 21 or 22 in the whole kingdom; “and yet,” says Mr. Bremner, in his *Excursions in Denmark, Norway, &c.*, “in the country districts, and in the provincial towns, you might as well ask for a bunch of fresh grapes as for the last newspaper; and all the time we were in Christiania, we did not see a journal in any one’s hand at the hotel, or in any other public place.” The most extensive circulation appears to be enjoyed by a daily paper called the *Morgenblad*, published at Christiania, which has been established 10 or 12 years, and the cost of which, sent by post, is 7 dollars, or 28s. sterling yearly.

In 1832, there were about 50 newspapers published in the whole of Sweden, 1 literary gazette, and several magazines. In Sweden, the press is under a very strict censorship, while in the sister kingdom it is quite free. This is a strange anomaly, that one paper under the same government should be permitted to publish with impunity, articles which would inevitably entail suppression of the journal, fine, and imprisonment, if published in another division of the country.

Finland.—In 1800, there was only 1 political and literary journal published in Finland, the *Abo Gazette*, which was commenced in 1771. In 1829, there were several periodical papers conducted with great talent, and possessing rather an extensive circulation. In 1839, there were 13 periodical publications existing; 7 of which appeared at Helsingfors, the capital of Finland, 2 at Abo, and 1 each at the towns of Wasa, Wybourg, Borgo, and Uleaborg. 9 of these journals are in the Swedish, and 4 in the Finnish language.

Southern Europe.—Spain.—The earliest Spanish newspaper began to be published about the commencement of the 18th century. In 1800, although there were 21 learned, and 61 economical societies in Spain, only two political newspapers were published, the *Madrid* and *Barcelona Gazettes*; and even now how few and how wretched are the Spanish newspapers! Taking the number of newspapers sold in every country as a criterion of the state of intellectual activity possessed by its inhabitants, Spain ranks lowest among the European states, having had but a few years ago, not more than 12 newspapers for a population of 12,000,000.

In the year 1834, there were in the whole extent of the kingdom, 98 newspapers, of which 21 disappeared in the course of the year. The 77 political journals that survived were thus divided: 51 had an official character, 3 were purely ministerial, and 23 belonged to various shades

of opinion. These latter papers cannot, to speak properly, be classed in a definite manner, for they frequently change their editors at a moment's notice, and their character is as fugitive and changeable as events.

The Madrid press, at the close of 1839, consisted of 8 daily papers, and 1 semi-weekly, besides a few literary papers. The official acts of the government are published in the *Gazette* (daily) at Madrid, and in an official bulletin in each of the 49 provinces into which the monarchy is divided. The cost of the different papers varies from 1*d.* to 6*d.* per copy.

Portugal.—The history of the Portuguese press may be told in a few words. There is no country in which literature has declined so rapidly within the last few years, as in Portugal. The freedom of the press in that country, and with it the unbridled expression of politics, have failed to produce their ordinary effects. Literature, instead of being encouraged, has suffered incalculable injury; for although there are upwards of 20 Portuguese newspapers and daily journals, we find them entirely engrossed with political and extraneous matters. In the capital, there are published about a dozen newspapers, two-thirds of which are daily. They are very small-sized journals, and charged about 9 dollars per annum. From a statistical table published in the *Diario do Governo*, in April 1840, it appears that by a recent census, the population of Portugal and Algarve does not exceed 3,224,474 souls, so that the average of newspapers is one for every 161,223 inhabitants. A paper is published at the Azores islands.

Italy.—The whole number of journals in Italy, including all periodicals, political, literary and scientific, exceeds 200. Few of the existing papers date back farther than the commencement of the present century. The greatest proportion of them are devoted to commercial, literary, and purely local matters, and few attempt to meddle with politics. In 1827, 3 journals appeared at Naples.

In Sicily there are also several respectable journals published, but our information does not permit us to give any authentic particulars respecting them.

Greece.—The Greeks have had, since 1821, political journals in their own language. There are 4 journals at Athens, 1 at Napoli, 2 at Hydra, and 2 at Missolonghi. Nothing deserving the title of a press exists in the Ionian Islands. The constitution of these islands enacts, that there shall be only a government press, and does not allow any other printing office to be established without the license of government, which has never yet been granted, during the 23 years of British protection. The *Government Gazette* of Corfu is therefore the only journal which appears in these States; one half of this paper is printed in Italian, and the other in the Romaic Greek; it has been published now 10 or 11 years, and the price is 15*s.* 2*d.* per annum.

The press in *Malta* is continually changing, from the discontinuance of old, and the establishment of new journals. There are now about a dozen periodicals published, most of them weekly, and in English. At *Gibraltar*, a government paper of a very diminutive size is published daily.

Turkey.—It is stated by some authorities, that a newspaper or *Gazette* was published at Constantinople as early as 1797, but this statement is very questionable.

The *Moniteur Ottoman*, a weekly official journal, published in French, under the sanction of the Sultan, was commenced at Constantinople in 1831-2; but after being kept up at great expense and to little purpose, for about 6 years, it died of inanition in 1839. Another weekly paper in French, but not official, was established on its ruins, under the title of the *Journal de Constantinople*, which had a very brief existence.

The journals published at Constantinople, in January 1841, were the *Tagrim Vakai*, a government paper, which is rather a register of official acts, than a record of news. It is published in classical Turkish, with translations into modern Greek and Armenian, at irregular periods, about every fortnight, and is edited by Sami Effendi. It has as many as 4,000 subscribers.

The *Djêrêdêï Havadis*, in vulgar Turkish, edited by Mr. W. N. Churchill, a new creation, containing all the news that it suits the Porte to have published, besides general information on European subjects, &c., is published every 10 days, and 500 copies of it are printed. An Armenian paper of the same nature has also just been commenced, edited by Mr. Oscanian, who was educated in America. It has from 200 to 300 subscribers. All the papers published in Constantinople are under a censorship.

At *Smyrna* there are 3 or 4 French papers, and one Armenian journal. Among the rest, an English paper under the title of the *Manzari Shark*, has been recently started by Mr. Churchill, who is editor and proprietor. He publishes it there, because it would not be permitted to be printed at Constantinople.

Africa.—In the whole extent of Africa there are about 14 journals published. One has appeared at Algiers regularly since its possession by the French in 1830. Two are published on the western coast, at the American colony of Liberia. An attempt was made on the 21st March 1838, to start a newspaper at Tripoli, by Sir Grenville Temple, and Mr. J. Richardson, the present editor of the *Malta Times*, but after the first number it was suppressed by the Bey, in consequence of some very injudicious remarks which it contained upon the Mahommedan religion.

Cape of Good Hope.—Although the freedom of the press was only established in this colony in 1829, yet there are now 11 political newspapers, 8 at Cape Town, and 3 at Graham's Town, for the Eastern district. The first newspaper, the *South African Commercial Advertiser*, was established on 7th January, 1824. It was, however, suppressed in the May following, recommenced in August of the ensuing year, again summarily suppressed in March 1827, since which period it has been re-established, and has continued to flourish.

The Cape Town newspapers are printed half in English and half in Dutch. The inhabitants do not yet support a daily paper; the Cape Town journals are therefore mostly published twice a week. There is a penny stamp affixed to the journals when transmitted inland, or from the Colony, but no duty on advertisements.

Egypt.—The Pacha of Egypt, among his other improvements, commenced, in the close of 1829, a newspaper at Boulaq, the port of Cairo, which was printed twice a week in Turkish and Arabic, in alternate columns, under the title of "*News from Egypt*." The *Moniteur Egyptien* was afterwards established at Alexandria, but both are now discontinued.

The Island of *Bourbon*, which was settled in 1672 by the French, has two newspapers ; and there are also two journals and an official Gazette, published at the *Mauritius*, the oldest of which was commenced in 1773. They appear three times a week.

Asia.—Persia.—An official Gazette, the first publication of the kind ever undertaken in Persia, was established on the 1st of January 1838, appearing twice a week at Teheran the capital. It is lithographed, the Persian metropolis not yet boasting of a letter-press printer. A second paper, called the *Afton Aluntab*, was commenced in Persia last year.

India.—The state of the press in India is very different from what it was some few years ago. There is not perhaps a much greater number of papers published, nor is the aggregate circulation of the whole very much above the sum total of the sale, when controversy ran high between the partisans of government and the friends of a free press and colonization. But there is a wide difference in the tone of the journals, and their contents indicate a higher degree of intelligence, and the possession of a much better knowledge of the affairs of the country. Newspapers are now as common in the British dominions abroad, as in England, and in British India 6 or 8 Gazettes are now published in the Bengalee language. One of the most striking features of the modern history of Hindostan, and the most unfailing guarantee of its improvement, is the diffusion of knowledge by the establishment of periodicals, and the promulgation of the Sacred Writings in the native dialects. There was great truth in Lord Wm. Bentinck's assertion, that the panacea for the evils, both moral and physical, endured by the natives, is "knowledge, knowledge, knowledge!"

In 1814, there existed but two papers at Calcutta besides the government Gazette ; in 1826, 3 more had been added ; and in 1833, there were as many as 33 different publications. The newspapers at the present time are, English daily papers, 6 ; tri-weekly, 3, and weekly, 8 ; native weekly papers 9.

The first Calcutta newspaper was *Hicking's Gazette*, which was commenced on the 29th January, 1781. The *Calcutta Gazette, or Oriental Advertiser*, appears to have been the second journal published in British India. It is a small official sheet, commenced on the 4th March 1784. The Calcutta daily papers now assimilate very closely to those published in London. The *Englishman* has a daily circulation of 1,300 to 1,400 subscribers, and is said to yield a profit of 5,000*l.* a year ; the cost of printing and conducting it being about 8,000*l.*

The *Bengal Hurkaru* (or Messenger), the oldest and leading journal of India, was originally established as a *weekly* newspaper in January 1795. The first number of the daily *Hurkaru*, being likewise the first daily paper ever published in India, appeared on the 29th April 1819. It has since been several times enlarged and improved, and is now as large as the London *Morning Post*. It has a circulation of about 1,600 copies, and has generally a page and a half of profitable advertisements.

From a Parliamentary Paper printed in 1832, we find that the number of periodical publications under the license or sanction of the British Government, at the several Presidencies, was as follows :—

	1814	1820	1830
BENGAL :—			
European Publications	1*	5	31
Native ,,	none	none	8
FORT ST. GEORGE :—			
European Publications	5	8	8
Native ,,	none	none	none
BOMBAY :—			
European Publications	4	4	12
Native ,,	none	2	4
Total . . .	10	19	63

From a list of Indian newspapers made out in 1836, it appeared there were published at Calcutta 3 daily papers, one thrice a week, one twice a week, and 6 weekly, besides several native publications not taken into account; at Serampore, 2 weekly; in the Mofussil, 6 weekly; at Madras, one four times a week, and 6 semi-weekly; at Bombay, 2 weekly, and 2 semi-weekly; at Singapore, 2 weekly; and 1 at Penang.

The weight allowed for newspapers by the post, is $3\frac{1}{2}$ sicca or tolas weight each cover, upon which postage is levied, as upon two rates—2 annas to stations within 400 miles, and 3 annas to stations exceeding that distance. Thus the postage on a daily paper to any station within 400 miles from Calcutta will amount to 40 rupees, and beyond that distance to 60 rupees, per annum.

The price of the Calcutta daily papers are 64 rupees, of the weekly 16 rupees; of the Bombay tri-weekly papers 60 rupees, semi-weekly 30 to 40 rupees.

The Madras and Bombay press has a less extensive circulation than that of Bengal, and it has been changing so much lately, that we possess less accurate details of its actual state. But we find at Madras 9 English newspapers published in 1839, nearly all semi-weekly.

At Bombay the English periodicals are 9 or 10 in number, all issued semi-weekly, and 4 native publications.

In the Ultra-Gangetic provinces, 1 newspaper is published at Loodianah, 1 at Moulmein, 1 at Delhi, 1 at Agra, and 1 at Serampore.

In the island of Ceylon 2 semi-weekly papers and an official Gazette are published. The first paper published in Ceylon was the *Government Gazette*, issued in 1802.

East of the Ganges we find a paper published at Pulo-Penang, under the title of the *Prince of Wales's Island Gazette*, which was commenced as early as 1805, but the publication was suspended for some years, and resumed in 1833. Malacca, on the Malay coast, has had several newspapers, one of which, entitled the *Register*, is still continued.

Two weekly newspapers are published at Singapore. The oldest was commenced in 1823, published at first at irregular periods. In the island of Pondicherry a French journal is published, and newspapers are also published at Batavia and Bencoolen. The Portuguese publish 2

* This does not appear to be correct.

newspapers at Macao. Two weekly English newspapers were published at Canton, but are now removed to Macao. The oldest of these is the *Canton Register*, the first number of which appeared on the 7th November, 1827. The *Peking Gazette*, a Chinese paper, is read every where by authority.

Australasia.—Sydney is the grand emporium of literature for this quarter of the globe, and there are published as many as 8 newspapers, all flourishing concerns, and in size and style, counterparts of the best of the English provincial journals. The price is high, 9d. per paper, considering that there is no stamp duty. One appears daily, the other twice or thrice a week. The oldest paper is the *Sydney Gazette*, which was commenced on the 5th March, 1805, fifteen years after the establishment of the colony.

At Melbourne three papers are published twice a week, and 1 weekly at Geelong, making in all 28 publications per week issued in New South Wales. Arrangements are now making for the publication of a paper at Maitland, and one will also be started at Portland Bay in a short time.

South Australia has 4 newspapers, 1 published semi-weekly at Adelaide, and the others weekly. The Swan River Settlement has 2 newspapers issued weekly.

Van Diemen's Land is rather behind her sister colony in this respect. There are in Hobart Town only 6 weekly newspapers, and 1 semi-weekly, besides 2 gratis advertising sheets; and in Launceston, 1 weekly and 1 semi-weekly paper, making in all only 13 publications per week in the whole colony of Van Diemen's Land.

Materials for printing a newspaper went out with the new colony to New Zealand, the first number of the *New Zealand Gazette*, having been printed in London before its departure. The second number appeared at Port Nicholson, on the 18th April, 1840, and a rival paper was forthwith established under the title of the *New Zealand Advertiser*, at Kororakika, Bay of Islands, on the 12th June, 1840.

The *Sandwich Islands*, which were but a few years since inhabited only by barbarians, have now their regular newspaper, ministering to all the wants which belong to civilized society. The *Sandwich Island Gazette*, published at Honolulu, Oahu, has now been established more than three years, and was conducted until lately by Mr. S. D. Mackintosh, who has recently gone to America, where he started another paper. The *Gazette* has since merged into the *Polynesian*.

It would be too much to expect that the preceding statement is perfect in all its details. It is, however, as complete as a long and diligent search for the existing information upon the subject, and an extensive correspondence with news-agents and public authorities in the United Kingdom and foreign countries, and more particularly in the British colonies, have enabled its author to make it; and it may be hoped that the first attempt to give a collective view of the newspaper press of the world will lead others to transmit to the Statistical Society of London more detailed statements for separate countries, which will furnish the means of correcting and filling up this sketch, and of preparing a similar and more complete statement at a future early period.

*Second Report of a Committee of the Statistical Society of London, appointed to collect and enquire into Vital Statistics, upon the Sickness and Mortality among the European and Native Troops serving in the Madras Presidency.**

YOUR Committee, in accordance with the intention expressed in their former Report, have examined the documents collected and brought before them by Mr. Annesley, relating to the sickness and mortality of the European and Native Troops serving at Moulmein on the Tenasserim Coast, at Penang, Malacca, and Singapore; and they propose, in their present Report, to submit to the Society the result of their investigation, prefacing it with a few observations on the local peculiarities of the several settlements under review.

The coast of the Tenasserim provinces extends from the 11th to the 17th degree of north latitude, the territory itself being bounded by the kingdom of Siam on the east, and the Burman empire on the north.

Nearly the whole of this immense territory is totally uncultivated, and still in a state of nature, covered in some parts with dense forests, and in others stretching into open plains many miles in extent, but frequently without a single inhabitant. The population is principally congregated in the vicinity of the three principal towns of Moulmein, Tavoy, and Mergui, the former of which, being the head-quarter station of the troops, particularly merits description.

It was founded in the year 1827, on the cession of these provinces to the British, when it became necessary to establish a large force as near as possible to the Burmese frontier. It is situated about 30 miles up the Saluen, a river nearly two miles broad, which there forms a junction with two other rivers of considerable size. The native town is on the river side, but the cantonments occupy a sloping bank about a quarter of a mile beyond it, and having a ridge of hills about 200 feet in the rear, which extends along the course of the river to the sea. On the opposite side, and a little to the north, is the town of Martaban, belonging to the Burmans, the course of the river serving as the boundary between the two countries. With the exception of several limestone rocks, which rise in most fantastic shapes from the plain, and the sandstone ridge before referred to, the whole country for many miles around is nearly a dead level, completely inundated during the rainy season, and remaining for several months after that period in a marshy state. At the distance of 20 or 30 miles, a range of hills from 1,000 to 2,000 feet in height, backed by others of immense elevation, shuts in the prospect to the north and east, while the level land continues to stretch away to the southward.

So level is the general character of the country in this part, that it has been computed that no less than 5,000 square miles are annually inundated by the overflowing of the river. The soil is consequently alluvial, with the exception of the ground on which the cantonment stands, which consists of sand, pipe-clay, and a species of iron-stone.

Dense forests, or interminable jungle, cover the greater part of the surface. In some parts, however, there are extensive plains several miles in extent, free from trees, but covered with a coarse rank grass: the banks of all the rivers, within reach of the tide, are thickly studded

* For First Report, see vol. iii., p. 14

with mangrove bushes. The population is exceedingly scanty; sometimes in a whole day's journey not an individual nor a habitation will be met with. Owing to this circumstance the extent of cultivation is very limited, though from the facility afforded by the inundation, little else is required than to cast the seed into the ground and return at the proper season to reap the produce.

The climate is principally distinguished for its extreme moisture; the average quantity of rain which falls is about 200 inches annually, or five times as much as in Britain. There are two seasons, the wet and the dry; the former commencing in April or May, and continuing till October, the other occupying the rest of the year; and as about 160 inches of the rain falls in the four months when the monsoon is at its height, the torrents in which it pours are really beyond description. Westerly winds prevail during the greater part of the year, and coming direct from the ocean are cool and refreshing. Indeed, with the exception of two months of the dry season, the temperature is considerably below the usual average in tropical climates.

The Peninsula of Malacca, or the Malayan Peninsula, as it is sometimes called, adjoins the southern extremity of the Tenasserim coast. It extends from the 1st to the 11th degree of north latitude, its estimated length being nearly 775 miles, and its average breadth about 125 miles. A range of lofty hills, whose bases are covered with a thick and almost impenetrable forest, extends from one extremity to the other; whilst innumerable streams descending from them on either side, supply, as they direct their course to the sea, the demands of a luxuriant vegetation.

On the eastern side of this narrow tract the sea is comparatively open and unobstructed. The western side, on the contrary, presents a continual succession of islands, increasing in number towards the southern extremity of the peninsula, and affording scenes of verdant and picturesque beauty, not exceeded in any part of the world.

Amongst these are the islands of Singapore and Penang; the former of which is situated at the southern extremity of the peninsula, from which it is separated by a narrow channel. The island itself is of an elliptical form, being about 27 miles in its greatest length, and 15 in its greatest breadth (averaging, according to another authority, 24 miles in length and 10 in breadth), and containing an estimated area of 270 square miles.

The eastern side of the island is generally low and flat, and has at some former period been partially covered by the sea. The western part presents an undulating surface; but there are no hills of any considerable elevation. One alone, according to Earle, attains a height of 1,500 feet. The eastern portion of the island is interspersed with fresh-water marshes, and its northern coast is skirted by extensive mangrove swamps, which, at some points, advance inland to a considerable distance. The fresh-water marshes are loaded with rank vegetation, the jungle upon them being literally impenetrable. The town is situated at the southern extremity of the low land above described, in Lat. $1^{\circ} 16' 2''$ N, and Long. $103^{\circ} 53' 2''$ E. It is built on the banks of a creek, which is navigable for the largest cargo-boats, and which at high tide overflows an extensive mangrove swamp, from which nearly all the ground, now occupied by the town, has been recovered.

Mr. Crawford, who was charged with the local administration of the settlement for a period of three years, states that its site and neighbourhood are composed of red sandstone, with occasional beds of shale, cellular clay iron ore, jaspery iron ore, and conglomerate; but that there are traces of granite in the northern and eastern portions of the island which are adjacent to the continent.

The climate of Singapore, from the absence of distinct seasons, is subject to little variation. The thermometer ranges throughout the year from 70° to 90° , and refreshing showers are frequently experienced. The greatest quantity of rain falls in December and January, and these are the coldest months; the hottest and driest are April and May. On an average of 4 years, 185 days were rainy, and 180 dry; during the north-east monsoon, from October to March, the settlement is refreshed by strong breezes blowing in from the China seas. The westerly monsoon, being interrupted by the Straits of Malacca and the neighbouring lands, is scarcely felt. On the whole, the town is distinguished for its salubrity; and it is a remarkable fact, that notwithstanding that the settlement is surrounded by marshes, and is exposed to many of the causes which are usually supposed to create malaria, malignant remittent fever has not been known there since its formation. It is a question how far the healthiness of the situation may be attributed to the free ventilation which it enjoys; in other parts of the island, less favoured in this respect, it is stated that fevers and dysentery are frequent.

The Island of Penang, or Prince of Wales's Island, lies between $5^{\circ} 15'$, and $5^{\circ} 29'$ north Lat., and in Long. $100^{\circ} 25'$ east, being about 400 miles north of Singapore. It is separated from the adjacent coast of Quada by a channel two miles in breadth, which constitutes the harbour of the settlement.

The island is about 16 miles long from north to south, and on an average is 10 miles wide, the northern end being considerably wider than the southern. Almost the whole of the northern part is mountainous, and a range of hills, varying from 350 to 2,600 feet in height, runs through the centre of the island. On the eastern side of this range is a level country, nearly three miles in breadth, and on the western and southern sides there is also a considerable extent of level ground, most of which is now in a state of cultivation; and even the hills, which were formerly covered throughout with lofty trees, thickly interlaced with creeping and parasitical plants, have to a great extent been cleared by the hand of European industry, and are at the present day studded with villas and gardens, and diversified with flourishing plantations of the clove and nutmeg. The natural soil, however, of these elevated portions of the island, forms but a thin and sterile layer on the mass of granite of which they are composed, and in the valleys it scarcely exceeds a few feet in depth, consisting for the most part of disintegrated granite washed down from the neighbouring hills, clay and sand, with an occasional superstratum of light vegetable mould. The whole surface of the island, notwithstanding, presents an appearance of perpetual verdure, which is constantly sustained by the extremely moist nature of the climate, rain falling on an average every other day, and heavy dews prevailing in clear nights throughout the year. It is seldom that a fair morning is

succeeded by a fine day, and the changes from fair to rainy, as well as from hot to cold, are as sudden as they are frequent.

From observations registered at George Town, the capital of the island, situated in the eastern coast, it appears that the mean temperature, during the year, is between 79 and 80 degrees of Fahrenheit, the highest point reached being 90° , and the lowest $70\frac{1}{2}^{\circ}$; but on the hills the temperature is from 8° to 10° lower, and the daily range of the thermometer is limited generally to 3° or 4° .

The climate of Penang is somewhat more varied than that of Singapore, but it can scarcely be divided into seasons. In January and February less rain falls than in any other part of the year, and in the latter part of the year the heat is sometimes excessive; towards the end of March the monsoon begins to exert its influence, and in the two succeeding months, especially in May, the falls of rain are frequent, but seldom heavy. June is rainy, and squalls from the westward prevail, becoming occasionally of so violent a character as to resemble in their effects the hurricanes of the West Indies; they are happily, however, of short duration. In the following three months the sky is overcast, and much rain continues to fall. In these months the atmosphere, saturated with moisture, becomes occasionally extremely oppressive, producing sensations similar to those experienced in a vapour bath, and causing great languor and debility. The early part of October is generally clear and pleasant, but at the latter end of it, the north-east monsoon is observable, northerly winds prevail, the clouds collect in dense masses, and rain falls heavily and incessantly for many days together, attended with a great deal of thunder and lightning. To this succeed the cool and delightful months of November and December; at this period the frame is invigorated by the morning breeze, and the noon-day heat is subdued by frequent and refreshing showers, while the atmosphere is purer and more free from moisture than at any other part of the year.

Although the climate of Penang is in many respects trying to European constitutions, its salubrity is greatly superior to that of the Carnatic or the province of Bengal. The cool and bracing breezes which are always experienced during the night and mornings, enable the frame to support the greater heat of the day, and the variation of the thermometer is less than at any station on the continent of India. To invalids a short residence on the hills has frequently been attended with the happiest effects. The extreme beauty of the surrounding scenery, the diminished temperature, and the lightness and purity of the atmosphere, revive the spirits and renovate the constitution; their beneficial influence is sensibly felt even in a few days, and but a short time elapses before the bodily functions resume their proper conditions, and the bloom of English health is substituted for the sickly aspect of disease.

The town of Malacca is situated on the Malayan peninsula, in Lat. $2^{\circ} 12' N.$, and Long. $102^{\circ} 10' E.$, being about 300 miles to the south-east of Penang, and 150 miles north-west of Singapore. The territory to which it belongs extends for 40 miles along the coast, and 30 miles inland; its general character being mountainous, and its geological structure one uniform mass of cellular iron ore.

The town occupies an area of 500 yards in length, and 400 in breadth, and is bordered on the south by the sea, and on the east and north by a

river, which, running for 40 miles through a jungly and hilly country, discharges itself at this point into the sea. Immediately beyond the river rises St. Paul's hill, about 70 or 80 feet above the level of the sea, and beyond this again extends for some distance a flat and marshy country, abounding in exhalations. In its general character the climate of Malacca resembles that of Penang. The range of the thermometer is somewhat less, but the mean temperature is the same. The mornings are rendered delightfully cool by showers, which fall almost every evening and night, and the day seldom passes without thunder and lightning. The north-east monsoon commences about the end of November, or the beginning of December, and rain and chilling winds prevail more or less till the months of April and May, when the thermometer rises to 88° , and sometimes to 90° , and the afternoons are close and sultry. The south-east monsoon prevails throughout June, July, and August, and the weather is then clear and temperate. At times, however, occur violent storms, called Sumatrans, from their apparently directing their course from the opposite coast of Sumatra. The wind then rages with appalling violence, and peals of thunder shake the buildings to their foundations—vivid flashes of lightning intervene, and a deluge of rain continues to fall for two or three hours after the storm is lulled. September is generally fine, with a steady breeze from the south-east. October and November are commonly rainy, with strong winds from the north-west.

The features which render Penang a desirable resort for invalids, are to be recognised at Malacca, and, like Penang, it rejoices in a moderate temperature, and slight variation of the thermometer throughout the year. It must, however, be borne in mind, that what has been said with respect to the favourable influence of these two stations, applies principally to their effect on European constitutions. The native troops, as will be seen by reference to page 146, suffer considerably more than at Moulmein.

Having given this general description of the localities, your Committee will now proceed to shew their influence on the different classes of troops, by numerical results.

I.—MOULMEIN.

The European force stationed at Moulmein consisted, up to 1838, of a regiment of H. M. Infantry, and a detachment of Artillery. In 1838 it was increased by another regiment of infantry, in consequence of the apprehensions of war with Burmah. The mean strength of the European force throughout the whole period was 974. The native troops likewise consisted of one regiment of infantry, until 1838, when another regiment was added, and of a company of gun lascars, with a small body of pioneers, sappers, and miners. The average of this force throughout the period was 1,156.

The two following tables exhibit the mean force, with the number of admissions into hospital and of deaths, during each year of the period under observation.

Statement of the Mean Strength, the Number of Admissions into Hospital, and Deaths, with the Ratio of Admissions and Deaths to the Mean Strength, among the European and Native Troops separately, at Moulmein, on the Tenasserim Coast, in each Year from 1829 to 1838.

EUROPEANS.					
YEARS.	Mean Strength.	Admissions.	Deaths.	Ratio per 1000 of Mean Strength.	
				Admitted.	Died.
1829	946	1,629	41	1,722·	43·3
1830	971	1,594	26	1,642·	26·7
1831	933	1,515	23	1,624·	24·9
1832	882	1,414	43	1,603·	48·7
1833	848	864	23	1,019·	27·1
1834	598	1,607	114	2,687·	190·6
1835*	..	..	..	..	..
1836	897	1,406	25	1,567·	27·8
1837	876	1,570	33	1,792·	37·6
1838	1,441	2,544	59	1,765·	40·9
Total, exclusive of 1834-35	7,794	12,536	273	..	..
Average	974	1,567	34	1,592·	34·6
NATIVES.					
1829	1,560	1,666	15	1,068·	9·6
1830	1,148	1,323	27	1,152·	23·5
1831	1,062	1,134	11	1,068·	10·3
1832	1,136	884	11	778·	9·6
1833	1,094	830	11	759·	10·0
1834	996	583	10	585·	10·0
1835	966	528	9	547·	9·3
1836	967	706	16	730·	16·5
1837	1,008	541	24	537·	23·8
1838	1,625	1,106	35	681·	21·5
Total	11,562	9,301	169	..	..
Average	1,156	930	16·9	804·	14·6

With regard to the first table, relating to European troops, it must be remarked, that the excessive sickness and mortality in the year 1834 arose entirely from the following circumstances attending the arrival of H. M. 62nd regiment. This regiment was attacked with cholera, on its march from Bangalore to Masulipatam, in the commencement of the year 1833, and lost 56 out of 590 men. On its arrival

* H. M. 62nd Regiment was transferred to the Bengal Presidency in January, 1835, and furnished no return to the Madras Government till November, 1835, when it was transferred back to the Madras Presidency. The accounts, therefore, for this year are too incomplete to be inserted.

at the latter place, it suffered still more dreadfully from fever and dysentery, about 170 deaths having taken place during the 15 months it remained there, and the extent of sickness was so great that when it was ordered to remove to Moulmein as a more healthy station, there was scarcely a man fit for duty. Of the 380 who embarked, 17 died on the voyage; and those who landed were in such a condition, that the removal from the ship to the hospital proved fatal to several. In many, organic diseases supervened upon frequent attacks of fever, and diarrhoea and debility were so general, that many deaths took place therefrom within a short period after their arrival, all of which, including the deaths on ship-board, and even some at Masulipatam, were included in the returns of this regiment for 1834.

Since, therefore, this extraordinary fatality was the result of another climate, and can in no wise be attributed to any circumstances connected with Moulmein, as is proved by the healthiness of the Artillery in the same year, it becomes necessary, in the following comparisons, to exclude the returns for the year 1834; and the same course must be adopted for the year 1835, because, owing to the temporary transfer of the same (62nd) regiment from the strength of the Madras to that of the Bengal presidency, no medical returns were received from it at Madras for several months. With these preliminary observations, we will examine the tables more minutely.

1. *European Troops at Moulmein.*—It appears from the first table, that the average of the mean annual strength of European troops at Moulmein, from 1829 to 1838, excluding 1834 and 1835, was 974. The average annual number of admissions into hospital during that period, was 1,592 per 1,000, and of deaths, 34 per 1,000. The greatest sickness in any year, excepting 1834, was in 1837, when the number of admissions was 1,792 per 1,000. In 1834 it was 2,687 per 1000. The least sickness was in 1833, when the admissions were only 1,018 per 1,000; in the next most favourable year (1836), they were 1,567 per 1,000.

The greatest mortality in any year, excepting 1834, when, from the causes already stated, it amounted to 190 per 1,000, was in 1832, when it reached 48 per 1,000; the lowest occurred in the preceding year, when it was only 24 per 1,000.

As the average annual number of admissions, during the whole period, was 1,592, each man was on an average admitted into hospital once in 7 months. The difference in the most unfavourable year is not great, and the fluctuation throughout the period was inconsiderable, with the exception of the year 1833, in which the amount of sickness was unusually small.

A comparison between the admissions into hospital and the deaths, shews, as might be expected, that the ratio of mortality does not necessarily coincide with that of sickness; for while, in one year catarrhs, or syphilis, or rheumatism, may be very prevalent, and swell the hospital lists considerably, the mortality may be comparatively light; and the very prevalence of those complaints which bring men under regime and medical surveillance, may actually prevent them from incurring other and more fatal diseases. The opposite proposition is equally true. The admissions may in the aggregate be few, but if the majority of them arise from liver and other dangerous diseases, the number of deaths would, in such a case, be comparatively great.

The returns from this station, compared with those from the Madras Presidency, exhibited in the first Report, shew that Moulmein is much more favourable to the health of the European troops, than that part of the continent of India. In Madras, on the average of the 12 years, from 1827 to 1838, the number of admissions among Europeans was 1,838 per 1,000, and of deaths, 48 per 1,000; while at Moulmein, during the 8 years from 1829 to 1838, excluding 1834-35, for the reasons before-mentioned, the admissions were only 1,592 per 1,000, and the deaths 34 per 1,000.*

It is however proper to state, that in 1827, the year preceding the series of returns which your Committee have had laid before them, a great amount of sickness and mortality prevailed at Moulmein, which, if that year had been included, would have brought the ratio of mortality nearly on a level with that which occurred at Madras. But the sickness which then proved so fatal was in a great measure to be attributed to the effects of the service of the troops in the Rangoon war, together with the nature of their employment, and their necessary exposure to many hardships, on their first arrival at Moulmein, which was then an uninhabited, uncleared spot, covered with wood, and where they had to encamp in tents until they had cleared the ground and built huts for themselves. No epidemic or endemic disease has prevailed at Moulmein since the troops have been stationed there, with the exception of a slight visitation of cholera in 1827; and so healthy is it considered by the medical officers of the Madras presidency, that it has been proposed to establish a sanatorium there for the invalid soldiers of that establishment, who would, under other circumstances, be discharged from the service, or sent to England.†

2. *Native Troops in Moulmein.*—The average of the mean annual strength of the native troops at Moulmein, from 1829 to 1838, was 1,156, among whom the ratio of admissions into hospital was 804 per 1,000, and of deaths 14 per 1,000. Compared with the Madras presidency, the admissions are nearly one-third more numerous, but the deaths about one-tenth less. The highest rate of admissions in any one year, was 1,152 per 1,000, and the lowest was 536 per 1,000; the former occurred in 1830, and the latter in 1837. The greatest mortality took place in the last year, when the number of admissions was smallest; it amounted to 23 per 1,000; while the least mortality, which occurred in 1835, was only 9 per 1,000.

It is deserving of notice, that the mortality during the last five years

* If the comparison be made with the returns for the corresponding years in Madras, the difference is less considerable; for in the 8 years from 1829 to 1838, excluding 1834-35, the admissions there averaged 1,748 per 1,000, and the deaths 45 per 1000. A similar rectification is not necessary as regards the native troops, since the exclusion from the Madras Returns of the two years 1827-28, for which no returns are furnished from Moulmein, has a very trifling influence upon the average.

† Moulmein was considered so healthy for European troops, that an experiment was made in 1836-37, of sending a number of artillerymen who were recommended to be discharged as unfit for the service by an invaliding committee; the result of which was highly favourable, as the greatest part of the men returned in perfect health, and were accordingly restored to the service. From this circumstance, it was thought that a sanatorium established at Moulmein for Europeans, would prove advantageous to the service, by restoring health to many men who would otherwise be lost to it, and thus prove a saving to the government both of men and of money.

among the native troops, has been very much higher than during the first five, in the proportion of 16·2 to 12·6 per 1,000; while among the Europeans, the increase during the last three years (for which alone the returns are complete), compared with the first three, is from 31·6 to 35·4 per 1,000. The increased mortality among the natives was accompanied by a nearly corresponding *diminution* in the number of admissions, which affords further testimony to the correctness of a previous observation, that there is not of necessity any correspondence between the annual ratios of sickness and mortality.

II.—PENANG, SINGAPORE, AND MALACCA.

1. *European Troops stationed at Penang.*—The annual aggregate strength of the European troops at Penang, during the ten years, was only 513, or an annual average strength of 51·3; a number so small compared with those in the other tables, as to render it unadvisable to pursue a minute enquiry on such data. The chief points worthy of remark are the greatly diminished ratio of mortality as compared with Moulmein, accompanied by a considerable increase of admissions. The deaths at Moulmein were 34·6, and at Penang, as shewn in the following Table, 17·7 per 1,000, or exactly one-half as numerous. The admissions at Moulmein were 1,591, and at Penang 2,193 per 1,000, or about one-third more numerous at the latter place.

Statement of the Mean Strength of the European Troops stationed at Penang, and of the Number of Admissions into Hospital and Deaths, with the Ratio thereof to the Mean Strength, in each Year from 1829 to 1838.

Years.	Mean Strength.	Admissions.	Deaths.	Ratio per 1000 of Mean Strength.	
				Admitted.	Died.
1829	35	81	..	2,314·	..
1830	37	66	..	1,784·	..
1831	57	126	1	2,211·	17·5
1832	61	204	2	3,344·	32·7
1833	54	162	3	3,000·	55·5
1834	54	153	..	2,833·	..
1835	50	125	1	2,500·	20·0
1836	56	65	1	1,161·	17·8
1837	54	71	1	1,315·	18·5
1838	55	81	..	1,473·	..
Total	513	1,134	9	..	..
Average	51	113	·9	2,193·	17·7

It has been suggested that the diminished mortality among the European troops at Penang, as compared with Moulmein, is owing to the circumstance of the corps at the former place consisting solely of artillery, who are generally reputed to be more healthy than troops of the line; either on account of the superior regulations and habits observed in their service, or of a higher scale of pay. This supposition, however,

is not well founded, as it has been ascertained that there has been no difference in the rate of mortality prevailing among the artillery and infantry serving at Moulmein.

2. *Native Troops at Penang, Singapore, and Malacca.*—The average annual mean strength of the native troops at Penang, Singapore, and Malacca, during the ten years from 1829 to 1838, was 1,994: the force was at the highest in 1832, when its mean strength amounted to 3,011; and in 1829 it was at the lowest, its mean strength being 1,529. The average number of admissions was 1,008 per 1,000; and the average number of deaths 20 per 1,000.

Statement of the Mean Strength of the Native troops, stationed at Penang, Singapore, and Malacca, and of the Number of Admissions into Hospital and Deaths, with the Ratio thereof to the Mean Strength, in each Year from 1829 to 1838.

Years.	Mean Strength.	Admissions.	Deaths.	Ratio per 1000 of Mean Strength.	
				Admitted.	Died.
1829	1,529	1,989	38	1,301·	24·8
1830	1,953	2,039	27	1,044·	13·8
1831	2,270	2,133	29	940·	12·7
1832	3,011	4,955	87	1,646·	28·8
1833	2,250	2,406	66	1,069·	29·3
1834	1,690	1,649	46	976·	27·2
1835	2,135	1,829	32	857·	14·9
1836	1,699	1,084	26	638·	15·8
1837	1,597	1,065	25	667·	15·6
1838	1,807	952	24	527·	13·2
Total	19,941	20,101	400	..	..
Average	1,994	2,010	40	1,008·	20·0

But during the years 1832-33 these troops were engaged in the field in Malacca, which caused a great increase of sickness and mortality in the returns for that period. If these two years be deducted, the average number of admissions will be reduced to 867 per 1,000, and that of deaths to 16·8 per 1,000. The former ratio is one-eighth higher than at Moulmein, and one-fourth higher than at Madras; the latter is one-seventh higher than at Moulmein, but merely a fraction higher than at Madras.

III.—DISEASES.

The following table exhibits the principal diseases with which the European and native troops were attacked, and the number who died of each class of disease, at the stations on the Tenasserim Coast. The returns do not furnish the means of separating the stations, but this is not of much consequence as regards European troops, since their number at Penang is too small to afford an average for separate investigation.

Statement of the Aggregate Strength of European Troops at Moulmein and Penang, and of the Native Troops at Moulmein, Penang, Singapore, and Malacca, of the Total Number of Admissions and Deaths among the whole force, and of the Annual Ratio per 1,000 of Mean Strength, distinguishing the principal diseases, in the 10 Years from 1829 to 1838.*

Diseases, according to Major Tulloch's Classification.	Diseases, according to Classification in the Moulmein Medical Returns.	EUROPEANS. Aggregate Strength of 8 Years, 8,207.				NATIVES. Aggregate Strength of 10 Years, 31,503.			
		Admissions.		Deaths.		Admissions.		Deaths.	
		Total Number among whole Force in 8 Years.	Ratio per 1,000 of Mean Strength.	Total Number among whole Force in 8 Years.	Ratio per 1,000 of Mean Strength.	Total Number among whole Force in 10 Years.	Ratio per 1,000 of Mean Strength.	Total Number among whole Force in 10 Years.	Ratio per 1,000 of Mean Strength.
Fevers	Fevers	3,608	440	65	7.92	9,371	298.	116	3.68
Eruptive Fevers . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Diseases of the Lungs . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
" Liver	Hepatitis	651	79	29	3.55	38	1.6	6	.20
" Stomach	Diarrhœa	976	119	12	1.46	1,340	42.	71	2.25
" and Bowels {	Dysentery	1,370	167	84	10.24	629	20.	39	1.24
Epidemic Cholera	Cholera	46	6	23	2.80	13	.4	2	.06
Diseases of the Brain . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Dropsies . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Rheumatic Affections	Rheumatism	574	70	5	.61	2,759	87.	47	1.49
Veneral	Syphilis	1,018	124	3	.36	1,202	38.	6	.19
Abscesses and Ulcers	Ulcers	597	72	. . . . .	. . . . .	3,305	105.	12	.38
Wounds and Injuries . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Punished . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Diseases of the Eye	Ophthalmia	188	23	. . . . .	. . . . .	309	10.	. . . . .	. . . . .
" Skin . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
All other Diseases	Other Diseases	4,364	532	60	7.31	10,436	331.	269	8.54
Total		13,392	1,632	281	34.25	29,402	933.	569	18.06

* Omitting the Returns of European Troops for the years 1834 and 1835, for the reason previously stated at p. 143.

EUROPEAN TROOPS.		
Mean Annual Strength of Force during 8 Years.	Annual Ratio of Admissions per 1000 of Mean Strength.	Annual Ratio of Deaths per 1000 of Mean Strength.
1,025	1,632	34·25

During the eight years' service of the European troops at Moulmein and Penang, from 1829 to 1838, excluding, for the reasons already stated, the returns for Moulmein in 1834 and 1835, the aggregate strength was 8,207, and the average annual strength, 1,025. The annual ratio of admissions per 1,000 was 1,632, and the annual ratio of deaths to the same standard, 34·25.

Fever is the most prevalent disease among these troops, the admissions from this cause being 440 per 1,000, or more than one-fourth of the total number. The mortality from fever is 7·92 per 1,000, which is considerably less than that caused by dysentery.

Dysentery and Diarrhœa rank next in prevalence; the admissions from these diseases being 286 per 1,000; but in fatality they stand much higher than fever, the proportion of deaths being 11·70 per 1,000, of which 10·24 are caused by dysentery, diarrhœa proving fatal only to 1·46 per 1,000.

Syphilis appears to have been very prevalent, and presents itself next in order. The admissions caused by this disease were 124 per 1,000. It proved fatal in 3 cases during the eight years, or 0·36 per 1,000.

Hepatitis, although comparatively infrequent, causes a mortality nearly equal to half of that occasioned by fever. The admissions from this disease were 79, and the deaths 3·55 per 1,000.

Ulcers caused 72, and *Rheumatism* 70 admissions per 1,000. The former did not prove fatal in a single case; the latter only in 5, or 0·61 per 1,000. *Ophthalmia* occasioned 23 admissions per 1,000.

Cholera stands lowest in regard to the number of admissions that it caused, which were only 46 in the eight years, or 6 per 1,000; but it was by far the most fatal disease, the deaths being exactly one-half of the number attacked, viz., 23, or 2·80 per 1,000 of the mean strength.

Diseases of the Lungs have been classed with other diseases, which prevents any definite conclusions as to the influence of that class on the European constitution in these climates.

The miscellaneous diseases amounted to 532 per 1,000, or nearly one-third of the total admissions; and the deaths which they occasioned were 7·31 per 1,000, which proportion is nearly one-fifth of the total mortality.

NATIVE TROOPS.		
Mean Annual Strength of Force during 10 Years.	Annual Ratio of Admissions per 1000 of Mean Strength.	Annual Ratio of Deaths per 1000 of Mean Strength.
3,150	933	18·06

In illustration of the healthiness of the native, as compared with the

European troops, it will be perceived that the annual ratio of admissions and deaths from all classes of disease was in both cases nearly twice as great among the latter force. The admissions per 1,000 were 1,632 among the Europeans, and 933 among the natives. The deaths per 1,000 were 34 among the Europeans, and 18 among the natives.

Fever is the most prevalent disease among the native, as well as among the European troops, the admissions from this cause being 298 per 1,000; which, although one-third less than the number among the European force, is a much greater proportion of the total number of diseases, in the ratio of a third to a fourth. The deaths from this cause are 3·68 per 1,000, or less than half the ratio which occurs among the European troops. But the sickness and mortality from fever among the natives is raised somewhat above the average by the excess in this class of diseases, which occurred during the employment of the troops upon active service in Malacca during the years 1832-33. In 1832 alone, the admissions for fever were nearly double, and the deaths were more than double, the average of the remaining period.

Ulcers, with the natives, are next in frequency, the proportion of admissions from this class of disease being as great as 105 per 1,000. They are also of a more aggravated character, as they occasioned death in 12 cases, or 0·38 per 1,000; while among the Europeans there was not any death from this cause.

Rheumatism presents itself next in order, the admissions being 87 per 1,000, which is one-fourth higher than among the European troops; while the deaths are 1·49 per 1,000, or more than double the proportion among the last-named force. It is worthy of remark, that rheumatism and ulcers are the only diseases specified by name which prevail to a greater extent, and cause a greater mortality among the natives than among European troops on these stations. Their frequency and severity among the natives, are, in fact, the causes of their being specially noticed in these returns.

Diarrhœa and Dysentery rank next in frequency; the admissions averaging 62 per 1,000, or less than one-fourth of the proportion among the European force. The mortality arising from these diseases is 3·49 per 1,000, which is nearly equal to that caused by fever among the natives. Compared with the mortality from the same diseases among the European force, it amounts to less than one-third; but there is this difference, which is not observable in the return from the Madras Presidency, that whereas among the Europeans dysentery carried off a greater proportion of the cases than diarrhœa, in the ratio of 7 to 1,—among the natives, on the contrary, diarrhœa caused nearly twice as many deaths as dysentery. This remarkable difference appears to indicate the superior power of the European constitution, derived in a great measure from a better quality of diet, to withstand the attacks of these diseases; for while the native, living chiefly upon vegetable food, sinks rapidly under an attack of diarrhœa, a victim to the debility arising from want of adequate nutrition, the European is seldom cut off by diarrhœa, except in cases in which it has supervened upon frequent attacks of dysentery, of which it often proves the fatal sequelæ.

Syphilis occasioned 38 admissions per 1,000 of the force, which is about one-third of the admissions from the same cause among the Euro-

peans ; but it was more fatal to the natives, as among them the proportion of deaths to the number of admissions from this disease, was 1 in 200, while among the Europeans it was 1 in 239.

Hepatitis is of very rare occurrence, furnishing only 38 cases, or 1 per 1,000. It was, however, of a fatal character, as nearly 1 in 6 of the attacks proved fatal ; although, as the number of admissions was so small, the deaths formed a very small fraction (0·20 per 1,000) of the total mortality. Among the Europeans, the proportion of fatal cases was only 1 in 32, the difference arising probably from the cause previously noticed, *viz.*, the inferior constitutional stamina of the natives, and their consequent inability to withstand acute diseases.

Ophthalmia.—The admissions from this cause among the natives were 10 per 1,000 of the mean strength, which is not one-half of the proportion that prevailed among the Europeans. One native is stated to have died of this complaint, but it is obvious that some other disease must have supervened.

Cholera is even more rare among the natives than among the Europeans, the admissions having amounted to only 0·4 per 1,000. The mortality arising from it was very much less, being only one death in $6\frac{1}{2}$ of the cases attacked, or 0·06 per 1,000 of the mean force.

The miscellaneous diseases occasioned 331 admissions per 1,000, or more than one-third of the total number ; while the mortality from the same class was 8·54 per 1,000, or nearly one-half of the whole number of deaths, which is a considerably larger proportion than among the Europeans, with whom the deaths from the miscellaneous class of diseases formed less than a fourth of the total mortality. This difference arises from the fact that in the miscellaneous class of diseases prevailing among the natives, there are many which arise from excessive debility and exhaustion, under which the native Sepoy sinks, but which are not, and cannot be, classed under any specific head. They arise purely from exhaustion, the effect either of direct debility, or of indirect debility from over excitement, such as too free an indulgence of the sensual passions, or the excessive use of stimulants to excite desire.

The general results, as far as can be gathered from these returns, are, that at the stations under examination dysentery is the most fatal disease among Europeans, and fever among the natives ; that the natives are cut off much more frequently by diarrhoea than by dysentery ; that liver complaints are very rare among the natives, but that they are very subject to rheumatism and ulcers, which occasion a mortality unknown to the European troops. An explanation of the difference as regards diarrhoea and dysentery has already been attempted, and the same reasons apply equally to rheumatism and ulcers.

IV. SICKNESS AND MORTALITY OF EUROPEANS AND NATIVES AT MOULMEIN, &c. COMPARED WITH MADRAS.

The medical returns from the Tenasserim Provinces do not furnish the same details relating to the diseases which have prevailed among the troops, as those received from the Madras Presidency ; several, however, of the principal diseases which affect the troops in the climate of India, being those which most frequently render the men unfit for

duty, are distinguished; and in the following table the results are exhibited, in connexion with the returns relating to the same diseases among the troops in the Madras Presidency, which are contained in your Committee's former Report.

*A Comparative Statement of the Sickness (as shewn by the number of admissions into Hospital) and Mortality of the European and Native Troops, at Madras, and at Moulmein (on the Tenasserim Coast), Penang, Singapore, and Malacca, distinguishing the principal diseases, in the 10 years from 1829 to 1838.**

DISEASES.	EUROPEANS.				NATIVES.			
	Admissions.		Deaths.		Admissions.		Deaths.	
	Madras.	Moulmein, &c.	Madras.	Moulmein, &c.	Madras.	Moulmein, &c.	Madras.	Moulmein, &c.
	Annual Ratio per 1000 Mean Strength.	Annual Ratio per 1000 Mean Strength.	Annual Ratio per 1000 Mean Strength.	Annual Ratio per 1000 Mean Strength.	Annual Ratio per 1000 Mean Strength.	Annual Ratio per 1000 Mean Strength.	Annual Ratio per 1000 Mean Strength.	Annual Ratio per 1000 Mean Strength.
Fever . .	349	440	5·57	7·92	189·	298·	3·53	3·68
Hepatitis .	116	79	5·62	3·55	·9	1·6	·11	·20
Diarrhœa .	78	119	1·55	1·46	16·	42·	·86	2·25
Dysentery .	188	167	15·03	10·24	9·6	20·	1·00	1·24
Cholera . .	27	6	7·6	2·80	9·	·4	4·04	·06
Rheumatism	102	70	·95	·61	53·	87·	·80	1·49
Syphilis, &c. .	192	124	·57	·36	23·	38·	·16	·19
Ulcers . .	74	72	·22	..	42·	105·	·37	·38
Ophthalmia .	72	23	·06	..	11·	10·	·02	·03
Other Diseases	640	532	11·46	7·31	261·5	331·	5·24	8·54
Total . .	1,838	1,632	48·63	34·25	615·	933·	16·13	18·06

Upon an investigation of this table, it appears that *Fever* caused among the European troops at Moulmein † 440 admissions per 1,000 of the mean strength, while in Madras it caused only 349 admissions per 1,000. The excess, therefore, at Moulmein is rather more than one-fourth. But the contrast is still more unfavourable as regards the mortality, since in Madras the deaths were 5·57 per 1,000, while at Moulmein they were 7·92 per 1,000, an excess of more than one-third. The same differences do not exist among the native troops in the two localities, as the excess of admissions on the Tenasserim coast is still greater, or 298 compared with 189 per 1,000; while there is scarcely any difference in the ratio of mortality, which varies only from 3·53 per 1,000 in Madras, to 3·68 per 1,000 at Moulmein.

Hepatitis caused 79 admissions per 1,000 among the European troops

* Omitting, as before, the returns of European troops for the years 1834 and 1835.

† In the following comparisons the name of the principal station on the Tenasserim coast, Moulmein, is used to represent all the stations in those provinces, and in the same manner Madras stands for the whole of the continental portion of the Madras Presidency.

at Moulmein, and 116 per 1,000 among the same class in Madras. In nearly the same ratio the deaths at Moulmein were 3·55 per 1,000, and those in Madras 5·62 per 1,000, the excess in the latter locality being in both instances about one-half. The native troops present only a trifling difference in this disease in the two localities, as in both it is one of the disorders which affect them least. The admissions do not in either locality exceed 1 in 1,000, and the deaths vary from 0·11 per 1,000 in Madras, to 0·20 per 1,000 on the Tenasserim coast.

Diarrhœa and Dysentery exhibit some rather curious anomalies in the two localities. Among the European troops the admissions for diarrhœa were 78 per 1,000 in Madras, and 119 per 1,000 at Moulmein, an increase of more than one-half at the latter station; while the deaths were somewhat less, or 1·46 compared with 1·55 per 1,000. The admissions for dysentery, on the other hand, were less at Moulmein, in the proportion of 167 to 188 per 1,000; while the deaths were one-third less, or 10·24 instead of 15·03 per 1,000. Among the natives both the admissions and deaths caused by diarrhœa were nearly three times as numerous at Moulmein as in Madras; the former being 42 compared with 16 per 1,000, and the latter being 2·25 compared with 0·86 per 1,000. The admissions for dysentery, also, were twice as numerous at Moulmein, or 20 compared with 9·6 per 1,000; but the deaths were only one-fourth more numerous, or 1·24 compared with 1· per 1,000.

Cholera appears to have been far less prevalent among both classes of troops at Moulmein than in Madras. As, however, this is a disease possessing somewhat of a periodical character, and the returns from the Tenasserim provinces do not extend over an equal number of years as those furnished from the Madras peninsula, the following results may be liable to modification. Among the European troops the admissions were 27, and the deaths 7·6 per 1,000 in Madras, and only 6 and 2·8 per 1,000, respectively, in the Tenasserim provinces. Among the native troops the admissions and deaths were 9 and 4·04 per 1,000 respectively in Madras, and 0·4 and 0·06 per 1,000 respectively at Moulmein.

Rheumatism is remarkable for the contrast exhibited by the two classes of troops. Among the Europeans both the admissions and deaths are considerably less at Moulmein than in Madras, in the proportion of 70 to 102 admissions per 1,000, and 0·61 to 0·95 deaths per 1,000. But among the native troops there is a difference as great on the other side. The admissions were 87 to 53 per 1,000, and the deaths 1·49 to 0·80 per 1,000. The greater susceptibility of the natives to rheumatism on this coast may be attributed partly to the greater coolness of the climate as compared with the continent of India, and partly to the want of sufficient nourishment, of which the Sepoy is frequently wont to deprive himself while on foreign service, and to the want of that care and attention which he receives from his family when serving at home.

Ulcers also exhibit a very large increase of admissions among the native troops, viz., 105 compared with 42 per 1,000, but the ratio of deaths is nearly the same (0·38 and 0·37 per 1,000) in both localities. Among the European troops the admissions were almost the same, but there were no deaths from this cause at Moulmein, while in Madras the deaths amounted to 0·22 per 1,000.

With regard to *Syphilis* there is a considerable decrease both of admis-

sions and deaths among the European troops, and a corresponding increase among the native troops. Of cases of *Ophthalmia* there is a great decrease among the European troops at Moulmein, and little variation among the native force.

There remains a large class of miscellaneous diseases, to which must be added those diseases which are distinguished in the returns from the Madras provinces, but not in those from the Tenasserim coast. These have produced among the European troops much less sickness and mortality in the latter locality than in the former. The admissions were respectively 532 and 640 per 1,000, and the deaths 7·31 and 11·46 per 1,000. Among the natives, on the other hand, there is a large increase, the admissions being respectively 331 and 261 per 1,000, and the deaths 8·54 and 5·21 per 1,000.

The general results of the table, taking all the diseases together, indicate that the Tenasserim coast, as compared with the continental portion of the Madras presidency, is favourable to Europeans, but not equally so to native troops. With regard to admissions into hospital, the ratio per 1,000 among Europeans was 1,838 in Madras, and 1,632 at Moulmein, which is equal to a decrease of one-ninth in the latter quarter. But among the natives the ratio per 1,000 of total admissions at Moulmein, &c. was 933, and if the returns from Malacca in the years 1832-33 be excluded, 832, while it was only 615 in the Madras provinces, so that there was an increase, in the latter case, of just one-third. The difference in the mortality was equally striking among the European troops. In Madras, the deaths were 48 per 1,000; at Moulmein they were only 34 per 1,000, a decrease of nearly one-third. Among the natives, however, they had increased from 16 to 18 per 1,000 on the total average, and had decreased to 15·5, if the Malacca returns for 1832-33 be excluded.

It is stated by a competent authority that one of the chief causes of the increased sickness among natives on foreign service, (as service on this coast is called,) is, first, an anxious longing desire to return to their families, whom they have left behind in India, which has a powerfully depressing influence on the mind of Sepoys; and, secondly, great privations, arising from a strong desire on their part to save as much of their pay as they possibly can in order to send it to their families; to these two causes may chiefly be attributed the increased sickness and mortality of Sepoys absent from their homes. In order, however, to guard against misapprehension on this head, it may be right to observe, that when any part of the native force is detached from the continent upon service to any of the out-stations in the Indian ocean, the government always authorises family certificates to be granted to each man, which enable the family to receive a certain proportion of pay monthly during their absence; and if any man dies while absent on duty, his family receives a pension. Notwithstanding this arrangement, which is always gratefully felt by the Sepoys, they have still the desire to hoard up their pay to send to their families, and thus deprive themselves of the necessary nourishment actually required to keep them in health. This fact has often been brought to notice, and there is reason to believe that arrangements have been made to prevent the evil; but it is difficult to interfere with the diet of Sepoys, and the task of amelioration is not easy of accomplishment.

There is also a remarkable difference in the nature of the diseases which produce mortality. Among the European troops there was a considerable increase of fever, but a decrease in almost every other class of disease, particularly in dysentery, cholera, and liver complaints. Among the natives, on the other hand, there was no increase of mortality from fever, although there was a great increase of sickness from that cause; but there was a large increase from diarrhœa, dysentery, and rheumatism. These differences are pointed out in a condensed form in the following table, and their probable causes have been already noticed.

DISEASES.	EUROPEANS.				NATIVES.			
	Admissions.		Deaths.		Admissions.		Deaths.	
	Difference per 1000 as compared with Madras.		Difference per 1000 as compared with Madras.		Difference per 1000 as compared with Madras.		Difference per 1000 as compared with Madras.	
	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.
Fever . .	91	..	2·35	..	109·	..	15·	..
Hepatitis .	..	37	..	2·07	·7	..	·09	..
Diarrhœa .	41	..	·09	..	26·	..	13·9	..
Dysentery .	..	21	..	4·79	10·4	..	·24	..
Cholera	21	..	4·80	..	8·6	..	3·98
Rheumatism.	..	32	..	·34	34·	..	·69	..
Syphilis, &c. .	..	68	..	·21	15·	..	·03	..
Ulcers	2	..	·22	63·	..	·01	..
Ophthalmia .	..	49	..	·06	..	1·	·01	..
Other Diseases	..	108	..	4·15	70·	..	3·29	..
Total	206	..	14·38	318	..	1·93	..

It remains only to shew how the Tenasserim coast ranks with regard to salubrity, in comparison with the other stations in which British troops are employed. Your Committee have abstained from making this comparison in their investigation into the several diseases, from an apprehension that some differences, which the returns do not afford the means of detecting, may exist in the method of classifying the diseases. They confine themselves therefore to a statement of the general results.

From the following table it appears that although the Tenasserim coast is considerably more favourable to European constitutions, than that part of the continent of India which belongs to the Madras Presidency, it is much more unfavourable to them than any of the European or African colonies, with the exception of Sierra Leone. The West Indies far exceed even the continent of India in insalubrity.

	RATIO per 1000.			
	Admissions.		Deaths.	
	Europeans.	Natives.	Europeans.	Natives.
United Kingdom, viz.—				
Dragoon and Dragoon Guards	929	..	14.	..
Gibraltar	966	..	21.4	..
Malta	1,142	..	16.3	..
Ionian Islands	1,201	..	25.2	..
Sierra Leone	2,978	812	483.	30.1
St. Helena	738	..	25.4	..
Cape of Good Hope, Cape District	991	..	13.7	..
,, Eastern Frontier	866	823	9.8	10.9
Mauritius	1,249	839	27.4	37.
Canada	1,097	..	16.1	..
Nova Scotia and New Brunswick	820	..	14.7	..
Bermudas	1,310	..	28.8	..
Windward and Leeward Islands.	1,903	820	78.5	40.
Jamaica	1,812	172	121.3	30.
Madras Presidency	1,838	615	48.6	16.1
Tenasserim Coast	1,632	832*	34.2	15.5*

* Excluding the returns from Malacca for the years 1832-33.

Your Committee have much pleasure in presenting this Report, believing that it may be productive of much benefit, by pointing out how differently the two races of men composing the British army on the Tenasserim coast are affected under a climate to which they are both, though not equally, strangers; and hoping that the results will lead to further enquiry as to the causes which influence these differences, as well as those which have been shewn in the preceding comparisons to prevail among the same classes of troops on the continent of India, and the detached stations on the Tenasserim coast.

It is desirable to ascertain what influence the nature of the climate has in producing this difference. The Tenasserim coast is certainly cooler, and exposed to smaller variations of temperature than the Indian continent; it is therefore more congenial to the European constitution, and for the same reason cannot be so congenial to the natives of the hotter climate. But it remains to be investigated how far the other circumstances mentioned in the Report operate injuriously on the health of the Sepoys, viz., the absence of the men from their families, depriving them of the domestic care and comfort which they possess at home, and in many cases causing nostalgia, together with the self-deprivation which the desire of saving their pay for their families encourages among one class, and the debauchery which the separation from their families excites among another.

The results of the present enquiry may, it is hoped, facilitate in some degree this investigation, and lead to the adoption of measures calculated to alleviate or remove the evils under which the Sepoys labour in these provinces, and to turn to the best account the advantages which the climate seems to hold out to Europeans.

Report on the State of Education in the Borough of Kingston-upon-Hull. By the MANCHESTER STATISTICAL SOCIETY.

[*Read before the Statistical Section of the British Association, 23rd September, 1840.*]

IN pursuing inquiries into the state of education, two different plans have been adopted by the Manchester Statistical Society. The first, was to employ an intelligent and trustworthy agent to visit and report upon every school in the district examined. The other, was to carry on a personal investigation, by employing the agent to visit from house to house, and to register the information which he obtained respecting every individual living within the district selected for examination. The annexed tables contain the result of an inquiry carried on upon the latter plan at Kingston-upon-Hull in the months of March, April, May, and June 1839, under the superintendence of a Committee of the Society. The whole of the facts were collected by the same agent to whom the previous investigations of the Society of a similar kind had been intrusted, and of whose perseverance and accuracy the Society have had ample experience.

The examination from house to house was confined to the *town* part of Kingston-upon-Hull, which was found to contain a population of 37,885, and its object was twofold: first, to throw light upon the physical, moral, and religious condition of the great body of the inhabitants; and secondly, to ascertain the state of education, both in its results, as apparent in the acquirements of the people, and with respect to the use which was made of the existing means of education for the younger portion of the community. On both these branches of the inquiry the Society are enabled to institute a comparison with the results of inquiries in other populous places; but in this Report the first branch is only touched on when it is connected with the subject of education. The jealousy of the teachers of the day-schools has prevented the agent from being able to furnish the Society with a detailed account of the systems of education pursued, and the character of the instruction there given, which formed a feature so novel and interesting in their earlier Reports; but this difficulty did not extend to the Sunday-schools, of which very complete information was obtained throughout the whole borough of Hull, containing a population of at least 52,000 inhabitants.

The township of Kingston-upon-Hull, which formed the portion of the borough examined from house to house, presents a remarkable contrast with the large towns visited in Lancashire in the character of the dwellings of the working classes.

It will be seen in Table No. 1, that there were only found 15 inhabited cellars, containing altogether 44 persons: thus while in Liverpool nearly one-fifth, and in Manchester and Salford about one-tenth of the working classes were found to be living in cellars, in Hull there are only 15 in every 10,000.

The system of living as lodgers, too, is less extensive in Hull, which is shewn in the same table by the large proportion of separate chambers let off as dwellings, there being only 6,239 heads of families occupying houses, as distinguished from chambers, out of the total number of 8,757 heads of families; whereas in a corresponding table for the township of Pendleton, near Manchester, about nine-tenths of the heads of

families are recorded as occupying houses, and the total population of Pendleton shews nearly $5\frac{1}{2}$ to each occupier, while in Hull it is only about $4\frac{1}{3}$.

The proportion of persons under 21 years of age is smaller in Hull than in Pendleton, and there is also less employment for children and females,* as shewn by Tables Nos. 2 and 3. The relative proportion of the sexes does not differ materially. But the most remarkable contrast between Hull and the Lancashire towns appears in the country from which the people spring. In Hull $95\frac{3}{4}$ per cent. of the heads of families were English, only 2 per cent. Irish, and $1\frac{1}{2}$ per cent. Scotch; and taking the whole adult population, the proportions are—

	per cent.
English	95·08
Irish	2·24
Scotch	1·36
Foreigners	·84
Welsh	·48
	<hr/>
	100·00

In Liverpool and Manchester the Irish form no inconsiderable portion of the whole working class. In Manchester more than $\frac{1}{6}$ th of the heads of families amongst the labouring population were Irish; and taking Manchester and Salford together, the Irish constitute $\frac{1}{6}$ th, the Welsh $\frac{1}{30}$ th, and the Scotch $\frac{1}{50}$ th of the whole, while in Liverpool the proportion of Welsh is much greater than in Manchester.

The greater apparent physical comfort of the working population in Hull may, no doubt, be attributed in part to the circumstances here indicated,† and may naturally be expected to have some influence on the state of education there.

It has been already noticed that the impediments thrown in the way of this inquiry by the teachers of day-schools, prevent the Committee from furnishing a classification of them; but the agent remarked the existence of a large number of charity schools. One of these was devoted to the education of youths intended for the mercantile marine, and many of the scholars there had attained a proficiency in the study of navigation highly creditable to the master. There were two proprietary schools, one chiefly supported by churchmen, the other by dissenters, and both appeared to be in a flourishing condition. The

* Under 10 years of age, only 43 children were found at work in Hull, while in Pendleton, with one-fourth of the population, there were 37. Between the ages of 10 and 15 there were twice as many at work in Pendleton in proportion to the total population, and between 15 and 21 years of age the proportion was also somewhat larger. One-third of the adults whose occupation was recorded in Pendleton were females, as were also about $\frac{9}{20}$ ths of the minors at work; while in Hull little more than $\frac{1}{3}$ rd of the minors at work were females, and not quite $\frac{1}{4}$ th of the adults.

† Of the heads of families there were ascertained to

have been born in the Township	1,905
To have resided there above 10 years	4,389
For shorter periods	1,362
And in cases where the information cou'd not be obtained	1,101

8,757

poor-house schools appeared both clean and orderly, and were conducted on a system somewhat assimilating to that of Dr. Bell. The infant schools, of which there were several, were of comparatively recent establishment; some few objections of a common-place character were occasionally urged against them, but upon the whole the feeling of the people was favourable to these institutions.

So far as the opportunity was afforded for observing the condition and management of the dame schools, they appeared to be equal to the same class of schools in Birmingham, and superior to those of Liverpool and Manchester. They were generally tolerably clean, and not so confined as in the large manufacturing towns. The qualifications of the mistresses, however, were not of a higher order than were generally met with elsewhere amongst the same class of teachers, and the remuneration was rarely more than was sufficient to give the bare means of subsistence. The prevailing idea existed, too, that the scholars are sent merely to be out of the way. The common day-schools being frequently held in apartments not regularly used as dwelling-rooms, there were fewer opportunities of access to them; but nothing transpired in the day-schools which were seen, or in conversations with the scholars or with their parents, to induce the belief that they were essentially different from the schools of a similar class which have been visited and reported on in other towns.

Six Tables, Nos. 4 to 9, are devoted to a minute classification of the acquirements and the duration of attendance at school of the population, both adult and minor. Deduced from these tables the following statement of the proportion of day scholars to the total population has been prepared, shewing, by comparison with the numbers in other districts previously examined, that the result for Hull closely approximated to York and Rutlandshire, which had been the most favourable examples hitherto brought to light by the inquiries of the society. The ascertained cases, in a population of 32,500, are here taken, and they furnish a proportion of,—

16·45	per cent.	of the total population attending day or evening schools.
3·33	„	were under 5 or above 15 years of age; leaving, therefore,
13·12	„	as the proportion to the total population, borne by the children between the ages of 5 and 15, then in attendance at day schools.

In Hull it was ascertained that the proportion of individuals of this age was 21 per cent. of the entire population; it is, therefore, proved that 7·88 per cent., or rather more than one-third of the children between 5 and 15, were not in attendance at the day schools. The actual number counted, corresponding with this proportion, was 2,573, of whom,—

58	were under instruction at home.
1,872	had been at day schools at some period.
	Of whom 306 were between the ages of 5 and 10.
	1,566 between 10 and 15.
238	were, or had been, at Sunday school <i>only</i> .
405	had never been at any school.

2,573

The following table, drawn up from earlier Reports of the Society in York, Rutlandshire, Liverpool, and Manchester, shews that the propor-

tion of children *not* in attendance at school, is smaller in Hull and York than in Liverpool and Manchester.

Proportion of Children attending Day and Evening Schools, as compared with the Total Population.

Per centage of the Total Population, being Children in attendance at—	York in 1836. Estimated Population 28,000.	Rutlandshire in 1838. Estimated Population 20,000.	Liverpool in 1835-6. Estimated Population 230,000.	Manchester and Salford 1834-5. Estimated Population 255,000.
Day Schools supported exclusively by the Scholars	7.18	6.77	6.70	7.33
Ditto supported or assisted by the public Evening Schools	9.63	8.05	5.87	2.35
	0.15	0.37	0.24	0.78
Total	16.96	15.19	12.81	10.46
Proportion to the total population of day and evening scholars under 5 and above 15 years of age. . . }	2.74	3.06	2.14	1.95
Proportion to the total population of day and evening scholars between 5 and 15 years of age. }	14.22	12.13	10.67	8.51
Proportion of children between 5 and 15 years of age estimated not to be in attendance at day or evening schools, about }	$\frac{2}{5}$	$\frac{1}{2}$	$\frac{5}{9}$	$\frac{2}{3}$

This comparison naturally leads to the inference, that the intellectual condition of the people, (as far as it is attested by mere acquirements obtained at school,) should be superior in Hull to that of the people of Lancashire; and accordingly we find that the number of adults who can read and write and cipher, amounts to nearly two-thirds of the ascertained cases, of whom at least nine-tenths can read; while at Pendleton, in Lancashire, only about one-third of the ascertained cases amongst the adults were able to read, write, and cipher, though nearly the same proportion as in Hull were able to read only.* In Pendleton, 405 adults, out of 4,855 ascertained cases, had never attended a day school; but some few of these had acquired the power of reading, and even of writing. In Hull, 417 only, out of 14,526 ascertained cases, had never been at a day school, and none of them had learned even to read. As in Pendleton, it may here also be remarked, in Hull, that of the adults who cannot write, more have attended schools than have not done so.

There is throughout a larger proportion of cases not ascertained in Hull than there was in the Pendleton inquiry; but making every allowance for these, it is found that in Hull, the proportion of children who have never attended school, is smaller than in Pendleton; and those children in Hull who had received some education, were found to possess superior acquirements; those who could read being in the proportion of 60 in Hull to 55 in Pendleton; those who could write being 30 in Hull to 24 in Pendleton; and those who could cipher being 22 in Hull to 12 in Pendleton.

An attempt was made in Hull to ascertain the age at which the chil-

* Among the adults in Hull, many were found to have a competent knowledge of figures for their ordinary business, who had either never acquired the art of writing, or who had forgotten it.

dren had been taken away from school, and the information was obtained in about three-fifths of the cases. The result given in Table No. 5, shews, that out of about 2,798 children, only—

131 had remained at school after reaching the age of 13.
 1,108 left at 12 and 13 years of age.
 964 „ 10 and 11 „
 595 left before 10; about one-half of whom had been removed before they were 9.

Hardly any of those who had left school before the age of 9 had acquired any knowledge of figures or of writing; and for 90 of them who were able to read, there were as many more who did it very badly, and above 120 who could not read at all.

It is a matter of some interest, with a view to ascertain the actual amount of instruction extracted from the schools, to compare the numbers who have attended, with the numbers of those who have acquired different degrees of proficiency in those elements of knowledge which it is professed there to teach, and which are usually taken as the tests of education; but, in doing this it is important to consider the regularity, or irregularity, of the attendance at school. Out of 5,345 children who were at school at the date of this inquiry, 307 cases occurred in which no satisfactory account could be obtained as to the regularity of attendance; and the attendance in 997 cases was admitted to be very irregular; so that in 4,001 cases alone can it fairly be assumed that the children were deriving from their attendance the whole of the benefit, little or great, which the schools were capable of affording. In the case of the children who had left school, the result was still more unfavourable; out of 4,097 ascertained cases, only 2,426 had attended regularly, and 1,671 irregularly; 543 cases occurred in which no satisfactory information on this point could be obtained. Taking the whole of the minors who either had been, or were at the time of the inquiry, at school, 6,427 were stated to have attended with regularity, and 2,668 irregularly; and in 850 cases no information on the subject could be obtained. The number of children who could read with ease corresponds very nearly with the number of those who had been regular in their attendance at school. The former amounted to 6,166, the latter to 6,427, and the number of those who could write and cipher was much smaller—the number of those who could write amounting to 3,038, and the number of those who could cipher to 2,207. It may with tolerable certainty be inferred from Tables Nos. 5 and 10, that there is the greatest regularity of attendance between the ages of eight and eleven. The result, so far as regularity of attendance is concerned, seems also to be in a trifling degree more favourable in the case of Hull than in that of Pendleton; in the former the regular scholars amounting to about 70, and in the latter to about 65 per cent.

The causes of irregularity of attendance seem to be very much the same at Hull as were assigned in former inquiries. The principal ones are enumerated as follows:—Poverty of parents, indifference of parents, ill-health of parents, migratory life of parents, idle habits of the children themselves, necessity of remaining at home to nurse younger children. Of these poverty is always the principal cause alleged, and is probably a frequent cause in reality.

Inability to provide decent clothing for them seems to induce many

parents to keep their children at home; and when the habits of the parents have not brought upon themselves this difficulty, the feeling, which is one of honest pride, though a mistaken one, can scarcely be considered either unnatural or discreditable.*

Of the 4,735 minors, who, at the date of this inquiry, had completed their education (such as it is), 823 were unable to read a whole sentence in any printed book, from beginning to end; 1,870 were entirely unable to write, and 2,282 entirely unable to cipher. In the same class of children, those who had been irregular attendants at school, amounted, as has been stated, to 1,671. It may therefore be fairly assumed, that of the irregular attendants in this class of children, nearly one-half, on leaving school, were unable to read, and that not one of these could write or cipher; and it seems an abuse of terms to speak of such irregular attendants as a class which had received education; nor would it be fair to consider their want of acquirement as any proof of incompetency on the part of the teachers. In former Reports of this Society, numerous facts have been adduced to prove that a large proportion of the schools for the lower classes are of a very inferior description; but indifferent as they are, there is no doubt that some good may be extracted from them by those scholars who are permitted to give them a fair trial.

With few exceptions, the working classes in Hull seem to have a just appreciation of the value of education,† as well those parents who have been deprived of the advantages of instruction, as those who have been more favourably circumstanced. Even in cases where the children were not obtaining instruction, there were few parents who did not speak of the circumstance with regret. Occasionally, persons in a condition somewhat above that of the operative classes, were met with, who had objections to education being carried beyond mere reading, writing, and arithmetic. A respectable female stated, that she had not allowed her daughters to learn to write, “because it would only set them writing love-letters.”

Several instances were met with of persons who had learned to read the Bible when at school, but for want of practice had forgotten how, or were only able to tell their letters. That this is not a still more frequent occurrence, must be attributed, in a great measure, to the Sunday schools.

* Amongst the number of parents whose children were of an age to be at school, but who were not attending any, 133 gave the following as reasons for their non-attendance:—

- 35 Poverty.
- 32 Irregularity of their employment.
- 19 Want of decent clothing.
- 6 The children living with their parents in boats on the river.
- 13 Ill health of parents.
- 15 Death of the father.
- 2 Desertion of the father.
- 11 Largeness of the family.

† The following remark was made by one woman in reference to schools conducted on the monitorial system: “I don’t like them, because lads teach, and then they say to t’others, ‘If you won’t gie me summut, I’ll have you up afore th’ maister;’ and them as can afford to gie ’em summut does well enough, and them as can’t, doesn’t do no good.”

These institutions receive a considerable impulse from the rivalry of the various sects by which they are supported ; and however much this disunion in religion may be to be deplored, in this respect certainly some good fruits are springing from it.* Although the proportion of Sunday scholars to the entire population does not equal that in some of the manufacturing towns of Lancashire, or in the county of Rutland, yet Hull takes rank in point of numbers along with Leeds, and before York, Birmingham, and Liverpool, as will be seen by the accompanying table :—

<i>Proportion per cent. of the Sunday Scholars to the Total Population.</i>								
	Hull 1839. *	Bury, 1835. *	Man- chester and Salford, 1834-5. *	Rutland- shire, 1838. *	Leeds, 1839. †	York, 1836. *	Birming- ham, 1838. ‡	Liver- pool, 1835-6. *
Church of England	6·11	7·67	5·11	11·60	5·03	6·10	2·54	2·75
Roman Catholic . .	0·31	0·78	1·76	11·60	} 8·88 {	5·91	0·18	0·30
Dissenters . . .	6·66	12·67	9·97	4·38			6·59	3·63
Total . . .	13·08	21·12	16·84	15·98	13·91	12·01	9·31	6·68
<i>Proportion per cent. of the Sects to the Total Number of Sunday Scholars.</i>								
Church of England	46·75	36·33	30·33	72·56	36·13	50·79	27·24	41·11
Roman Catholic . .	2·35	3·67	10·46	72·56	} 63·87 {	49·21	2·02	4·56
Dissenters . . .	50·90	60·00	59·21	27·44			70·74	54·33
Total . . .	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00

* Inquiries conducted by the Manchester Statistical Society.

† Inquiry conducted by the Town Council of Leeds.

‡ Inquiry conducted by a Committee in Birmingham.

The influence of the Sunday schools, in a moral and religious point of view, is not confined to the children who frequent them, but extends itself to the families of which they are members, and serves to keep alive a sense of religion in the domestic circle, which might otherwise often run much risk of being extinguished. A similar value attaches to the adult schools, supported in like manner by the zeal of religious sects. Several poor old people bore testimony, that beyond the mere teaching them to read, these schools had been eminently serviceable to them in a spiritual point of view.

* In a classification of the answers given by the heads of families, as to their religious denomination, no less than 18 different Christian sects were enumerated ; and 10 of these support their separate Sunday schools.

TABLE I.—Age and Country of the Population.

Families occupying	Number of Heads of Families belonging to each Country.						Number of Resident Population.			Non-resident Minors, Children of Resident heads of Families.
	English.	Irish.	Scotch.	Welsh.	Foreigners.	Total.	Adults, above 21.	Minors, under 21.	Total.	
Houses .	6,035	80	84	5	35	6,239*	16,389	13,515	29,904	606
Chambers .	2,338	97	53	4	11	2,503	4,818	3,119	7,937	30
Cellars .	14	..	1	..	..	15	25	19	44	..
Total .	8,387	177	138	9	46†	8,757	21,232	16,653	37,885	636

* The number of unoccupied houses, in addition to the above, was 195, exclusive of warehouses, offices, and other premises in which no person slept.
† Of this number there are 15 Germans, 7 Italians, 5 Poles, 4 Swedes, 3 Prussians, 3 Dutchmen, 2 Americans, 2 Norwegians, 2 French, 1 Hungarian, 1 West Indian, and 1 not ascertained.

In collecting the materials from which these Tables were compiled, one of the chief obstacles arose from the unwillingness of parties to afford the requisite information. In all such cases, however, the particulars necessary for the completion of the following Tables were obtained, although, in some instances, not without much difficulty.

Supplement 1, to TABLE I.

Occupation of Non-Resident Minors.	Males.	Females.	Total.
Domestic Servants	3	239	242
Sailors	126	..	126
At School	15	21	36
With relatives at distance . .	6	26	32
Apprentices, or learning business	53	22	75
Married	4	8	12
Soldier	1	..	1
With the Parish	1	1	2
	209	317	526
Not ascertained . .	..	..	110
Total . .	..	..	636

Supplement 2, to TABLE I.

Among the Population were found	Males.	Females.	Total.
Imbecile, Adults (all) . . .	7	10	17
Idiots, Minors (all)	4	3	7
Deaf and Dumb, Adults . . .	2	2	4
,, Minors	3	4	7
Blind, Adults	5	6	11
,, Minors	4	3	7
Total . .	25	28	53

TABLE II.—Occupation of Adults.

OCCUPATION.	COUNTRY.					Total.	SEX.	
	English.	Scotch.	Irish.	Welsh.	Foreigners.		Males.	Females.
Labourers and others employed } about the docks ^a }	838	4	74	21	7	944	942	2
Sailors ^b	1,257	3	10	31	20	1,321	1,321	..
Building Trades ^c	696	9	23	..	2	730	730	..
Clothing Trades ^d	1,249	20	13	..	3	1,285	802	483
Domestic Servants	894	3	5	1	1	904	58	846
Agricultural and other out-of- } door Employments ^e }	558	12	48	..	4	622	619	3
Others employed at home ^f	884	8	11	..	1	904	114	790
Clerks, Shopmen, &c. ^g	491	4	5	..	6	506	486	20
Merchants and Professional } Men	332	6	3	..	3	345	344	1
Retail Brewers ^h	58	1	1	..	..	60	30	30
Factory Hands ⁱ	35	1	1	..	..	37	14	23
Shopkeepers, Retailers, and } Agents	1,261	24	20	1	38	1,344	1,138	206
Handicrafts ^j	1,654	54	33	1	9	1,751	1,708	43
Licensed Victuallers	204	..	..	..	..	204	180	24
Miscellaneous ^k	312	10	10	..	3	335	310	25
Prostitutes keeping and living } in Brothels ^l	83	..	3	..	..	86	..	86
Rivermen, Boatmen, &c. ^m	254	..	1	..	..	255	254	1
Hand-weavers ⁿ	33	..	2	..	..	35	35	..
Not ascertained	59	1	..	..	1	61	38	23
Total employed	11,152	160	263	56	98	11,729	9,123	2,606
Total unemployed						9,503	709	8,794
Total						21,232	9,832	11,400

^a Including lumpers, stowers, ship-deliverers, truckmen, staithmen, dock-porters, dock-gatemen, gold-dusters, and corn-meters.

^b Of this number, 573 were at sea at the time of this inquiry, viz., 558 English, 10 Scotch, and 4 foreigners, master-mariners, and mates, inclusive.

^c Stone-masons, bricklayers, carpenters, joiners, plumbers, glaziers, painters, brick-makers, and hod-men are comprised in this class.

^d Including tailors, shoemakers, hatters, stocking-makers, dress, stay, and bonnet makers, milliners, and sempstresses.

^e Gardeners, grooms, carters, coachmen, guards, and hackney-coachmen, railway labourers, coal-carriers, porters, and hawkers, are included.

^f Teachers, wash-women, manglers, clothes-cleaners, charwomen, hucksters, with bakers and butchers, (not being principals,) and all persons pursuing any calling at home from which an income was derived, and which did not belong to any other class, are comprised under this class.

^g Including persons employed in warehouses, shops, and offices, except principals, who are arranged under the heads to which they respectively belong.

^h These are what are commonly denominated beer-shops.

ⁱ Some of these are employed in flax-spinning. The great proportion of factory hands reside in the out-townships, to which this inquiry did not extend.

Persons subsisting by manual labour and not belonging to any other class, and not being principals, nor keeping a shop, are included in this class.

^k Under this head are arranged custom-house and excise officers, editors, policemen, midwives, and nurses.

^l None but those who acknowledge themselves of this description, or whose character was notorious in the neighbourhood, have been included in this number.

^m Including pilots, persons employed in sloops trading up the river, fishermen, ferrymen, and lightermen.

ⁿ Winders are reckoned with these, nearly the whole of whom are employed in making sail-cloth.

TABLE III.—*Occupation of Minors.*^a

OCCUPATIONS.	AGE.				Total.	SEX.	
	Under 5.	5 and under 10.	10 and under 15.	15 and under 21.		Males.	Females.
Domestic Servants	8	144	706	858	28	830
Agricultural, and other out-door employments ^b	..	5	28	76	109	102	7
Factory hands ^c	5	41	30	76	34	42
Others employed at home ^d	13	68	81	14	67
Mechanics and Handicrafts	8	149	561	718	682	36
Building Trades ^e	3	61	197	261	260	1
Clothing Trades.	1	65	335	401	179	222
River and Boat-hands ^f	13	11	24	24	..
Clerks, Warehousemen, &c.	1	56	322	379	362	17
Errand-boys, &c.	7	198	74	279	276	3
Sailors ^g	49	131	180	179	1
Labourers (Dock) ^h	2	16	50	68	68	..
Miscellaneous	1	6	19	26	24	2
Professional	14	14	14	..
Prostitutes living in brothels	1	20	21	..	21
Sweeps	2	6	11	19	19	..
Hand-weavers	2	9	11	9	2
Not ascertained	3	22	25	25	..
Not employed in business	43	851	2,656	3,550	2,299	1,251
	4,948	4,134	2,879	1,142	13103	5,603	7,500
Total	4,948	4,177	3,730	3,798	16653	7,902	8,751

^a Young persons learning business, or earning wages only, are recorded among the employed in this Table.

^b This class includes gardeners, persons employed in husbandry, carters, coachmen, grooms, railway labourers, hawkers, coal carriers, and porters.

^c Some of these are employed in flax spinning.

^d Persons employed in washing, mangling, and charring, with bakers and butchers, not being principals, are comprised under this head.

^e This class comprises stonemasons, bricklayers, carpenters, joiners, plumbers, glaziers, painters, brickmakers, and hodmen.

^f Under this head are classed lighter boys, boat-hands, pilots, with hands employed in ferries and fishing smacks.

^g Of this number, only 35 were from home at the time of this inquiry.

^h Persons employed in the loading and unloading of vessels, and in attending the arrival and departure of steam-boats, are comprised in this class.

TABLE IV.—*Schooling of Minors and Adults.*

AGE.	Number who have been, or are at School.						Regularly instructed at Home.	Total who have been instructed.	Total who have never been at School.	Not ascertained.	Total.
	Both Day or Evening, and Sunday Schools.	Day or Evening School only.	Sunday School only.	Boarding School.	Description of School not ascertained.	Total.					
Under 5 Years	102	830	10	5	14	961	16	977	3,337	634	4,948
5 and under 10	1,948	1,206	141	75	45	3,415	38	3,453	311	413	4,177
10 and under 15	1,891	874	97	84	12	2,958	20	2,978	94	658	3,730
15 and under 21	1,302	578	89	93	926	2,988	4	2,992	47	759	3,798
Total of Minors	5,243	3,488	337	257	997	10,322	78	10,400	3,789	2,464	16,653
Total of Adults*								19,989	417	826	21,232
Total								30,389	4,206	3,290	37,885

* The only information sought, respecting the education of adults, was, what were their acquirements, and whether they had, or had not, been at School.

TABLE V.—Age at which Minors, not now at School, left School.

AGE.	Left School at													Total who have left School.	Now at School.	Have never been at School.	Regularly instructed at home.	Have been at, or are attending, a Sunday School.	No particulars ascertained.	Total.		
	3 years of age.	4 years of age.	5 years of age.	6 years of age.	7 years of age.	8 years of age.	9 years of age.	10 years of age.	11 years of age.	12 years of age.	13 years of age.	14 years of age.	15 years of age.								16 years of age.	Not ascertained.
Under 5 years .	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	4	947	3,337	16	10	634	4,948
5 and under 10 .	2	4	15	43	72	74	29	..	..	..	..	..	..	..	67	306	2,968	311	38	141	413	4,177
10 and under 15 .	..	..	..	2	21	50	197	300	226	219	55	3	..	..	493	1,566	1,295	94	20	97	658	3,730
15 and under 21 .	..	1	..	1	7	21	52	182	256	583	251	120	7	1	1377	2,764	135	47	4	89	759	3,798
Total . .	3	8	15	46	100	145	278	482	482	802	306	123	7	1	1937	4,640	5,345	3,789	78	337	2,464	16,653

The above table includes only those that were represented by their parents as having left school without there being any intention of their returning; those cases in which, from illness or other causes, children were only temporarily detained at home, being excluded.

TABLE VI.—Acquirements of Minors with the Age at which they left School.

Age at which they left School.	Total.	Acquirements not ascertained.	Total Acquirements ascertained.	READING.			WRITING.			CIPHERING.			SEWING.		
				Able to Read.	Barely able to Read.	Unable to Read.	Able to Write.	Barely able to Write.	Unable to Write.	Able to Cipher.	Barely able to Cipher.	Unable to Cipher.	Able to Sew.	Barely able to Sew.	Unable to Sew.
3 Years	2	..	2	..	..	2	..	..	2	..	..	2	..	..	2
4 "	3	..	3	..	..	3	..	..	3	..	..	3	..	..	3
6 "	46	..	46	13	16	17	..	1	45	..	..	46	7	2	37
7 "	106	..	106	33	30	43	2	2	102	1	..	105	38	2	66
8 "	153	3	150	44	48	58	3	6	141	2	..	147	62	..	88
9 "	292	1	291	158	83	50	36	22	233	13	7	271	36	2	253
10 "	477	1	476	360	59	57	90	34	352	50	20	406	267	2	207
11 "	543	..	543	424	46	73	169	25	349	106	17	420	280	..	263
12 "	687	1	686	659	18	9	392	68	226	260	58	368	378	1	307
13 "	319	1	318	308	5	5	269	19	30	212	9	97	140	..	178
14 "	133	1	132	129	..	3	109	3	20	101	..	31	49	..	83
15 "	7	..	7	7	..	..	7	..	..	7	..	..	4	..	3
16 "	1	..	1	1	..	..	1	..	..	1	..	..	1	..	..
Not ascertained	1,871	1,057	814	616	97	101	388	59	367	393	35	386	1,317	1	496
Total left School . . .	4,640	1,065	3,575	2,752	402	421	1,466	239	1,870	1,156	137	2,282	1,579	10	1,986
Now under Instruction, or never attended School. }	12,013	2,193	9,820	3,414	962	5,444	1,572	486	7,762	1,051	146	8,623	1,673	99	8,048
Total	16,653	3,258	13,395	6,166	1,364	5,865	3,038	725	9,632	2,207	283	10,905	3,252	109	10,034

Note.—The age of leaving school was that given either by young persons themselves or by their parents; and, where there was no apparent ground to question its correctness, the answer was so recorded. The column of "Acquirements not ascertained" includes those who declined to afford the information, or were unable to name the age with certainty, and those whose statements appeared doubtful. Persons able to read the Bible fluently have been set down in the first column; those who could manage monosyllables or dissyllables, in the second; and those who could merely tell a few letters, in the third. Persons writing freely and legibly are classed in the first column; and those who wrote with difficulty, intermixing capitals with small letters, or being able to do little more than write their names, are in the second column. In arithmetic and sewing, the statements of parties themselves were taken; in the former case frequent opportunities were afforded for judging of the manner in which persons estimated their attainments. In recording the acquirements of individuals every opportunity was seized of testing the truth of the statement made, and the instances were very few indeed, in which any one was found attempting to deceive.

TABLE VII.—*Schooling and Acquirements of Minors under 5, and from 5 to 10 Years of Age.*

Attending School, or otherwise, and Description of School.	Total.	Acquire- ments not ascertained.	Total Acquire- ments ascertained.	READING.			WRITING.			CIPHERING.			SEWING.		
				Able to Read.	Barely able to Read.	Unable to Read.	Able to Write.	Barely able to Write.	Unable to Write.	Able to Cipher.	Barely able to Cipher.	Unable to Cipher.	Able to Sew.	Barely able to Sew.	Unable to Sew.
<i>Under 5 Years of Age.</i>															
Day or Evening, and Sunday .	102	..	102	1	10	91	..	..	..	..	..	..	..	1	89
Day or Evening only . . .	826	9	817	4	16	797	..	..	..	..	..	..	1	2	816
Sunday only . . .	10	..	10	1	..	9	..	..	..	..	..	..	..	..	10
Boarding . . .	5	1	4	1	2	1	..	..	..	..	..	..	..	..	5
Description not ascertained .	14	..	14	..	..	14	..	..	..	..	..	..	..	..	14
Have been, but not now at school	4	..	4	..	..	4	..	..	..	..	..	..	..	..	4
Regularly instructed at home	16	16	..	..	..	..	..	..	..	..	..	..	..	..	..
Never been instructed . . .	3,337	..	3,337	..	..	3,337	..	..	..	..	..	..	..	..	3,337
No information obtained . . .	634	634	..	..	..	..	..	..	..	..	..	..	..	..	..
Total . . .	4,948	660	4,288	7	28	4,253	..	..	..	..	..	..	1	3	4,275
<i>5 and under 10 Years of Age.</i>															
Day or Evening, and Sunday .	1,765	37	1,728	728	566	434	80	97	1,551	25	32	1,671	461	66	1,201
Day or Evening only . . .	1,083	171	912	515	177	220	111	81	720	31	26	855	274	27	611
Sunday only . . .	141	7	134	21	28	85	3	3	128	..	2	132	19	..	115
Boarding . . .	75	75	..	..	..	..	..	..	..	..	..	..	..	..	..
Description not ascertained .	45	15	30	12	4	14	1	3	26	..	1	29	..	..	30
Have been, but not now at school	306	24	282	96	82	104	16	4	262	1	2	279	47	3	232
Regularly instructed at home	38	38	..	..	..	..	..	..	..	..	..	..	..	..	..
Never been instructed . . .	311	..	311	..	..	311	..	..	311	..	..	311	..	..	311
No information obtained . . .	413	413	..	..	..	..	..	..	..	..	..	..	..	..	..
Total . . .	4,177	780	3,397	1,372	857	1,168	211	188	2,998	57	63	3,277	801	96	2,500

TABLE VIII.—*Schooling and Acquirements of Minors, from 10 to 21 Years of Age.*

Attending School, or otherwise, and Description of School.	Total.	Acquire- ments not ascer- tained.	Total Acquire- ments ascer- tained.	READING.			WRITING.			CIPHERING.			SEWING.		
				Able to Read.	Barely able to Read.	Unable to Read.	Able to Write.	Barely able to Write.	Unable to Write.	Able to Cipher.	Barely able to Cipher.	Unable to Cipher.	Able to Sew.	Barely able to Sew.	Unable to Sew.
10 and under 15 Years of Age.															
Day or Evening, and Sunday.	678	12	666	567	63	36	173	122	371	159	13	494	321	2	346
Day or Evening only . . .	521	124	397	379	7	11	209	33	155	124	64	209	158	..	239
Sunday only . . .	97	3	94	53	18	23	16	6	72	6	1	87	49	2	43
Boarding . . .	84	49	35	32	3	..	27	5	3	21	3	11	16	..	19
Description not ascertained .	12	10	2	2	..	..	2	..	..	2	..	..	..	..	2
Have been, but not now at school	1,566	23	1,543	1,186	233	124	557	237	749	371	58	1,114	516	5	1,022
Regularly instructed at home	20	20	..	..	..	..	..	..	..	..	..	..	..	..	..
Never been instructed . . .	94	..	94	..	..	94	..	..	94	..	..	94	..	..	94
No information obtained . .	658	658	..	..	..	..	..	..	..	..	..	..	..	..	..
Total . . .	3,730	899	2,831	2,219	324	288	984	403	1,444	683	139	2,009	1,060	9	1,765
15 and under 21 Years of Age.															
Day or Evening, and Sunday.	6	1	5	5	..	..	3	1	1	2	1	2	3	..	2
Day or Evening only . . .	34	9	25	25	..	..	19	..	6	18	..	7	9	..	16
Sunday only . . .	89	13	76	43	17	16	28	1	47	15	3	58	23	..	53
Boarding . . .	93	75	18	18	..	..	18	..	..	18	..	..	10	..	8
Description not ascertained .	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..
Have been, but not now at school	2,764	56	2,708	2,477	138	93	1,775	132	801	1,414	77	1,217	1,345	1	1,362
Regularly instructed at home	4	4	..	..	..	..	..	..	..	..	..	..	..	..	..
Never been instructed . . .	47	..	47	..	..	47	..	..	47	..	..	47	..	..	47
No information obtained . .	759	759	..	..	..	..	..	..	..	..	..	..	..	..	..
Total . . .	3,798	919	2,879	2,568	155	156	1,843	134	902	1,467	81	1,331	1,390	1	1,488

TABLE IX.---Age and Acquirements of the Population.

	Total.	Acquire-ments ascer-tained.	Total Acquire-ments ascer-tained.	READING.			WRITING.			CIPHERING.			SEWING.		
				Able to Read.	Barely able to Read.	Unable to Read.	Able to Write.	Barely able to Write.	Unable to Write.	Able to Cipher.	Barely able to Cipher.	Unable to Cipher.	Able to Sew.	Barely able to Sew.	Unable to Sew.
<i>Minors who have been, or are at Day or Evening School.</i>															
Under 5 Years	591	10	941	6	28	907	..	..	941	..	..	941	1	3	937
5 and under 10. . . .	3,274	322	2,952	1,351	829	772	208	185	2,559	57	61	2,834	782	96	2,074
10 „ 15	2,861	218	2,643	2,166	306	171	968	397	1,278	677	138	1,828	1,011	7	1,625
15 „	2,899	143	2,756	2,525	138	93	1,815	133	808	1,452	78	1,226	1,367	1	1,388
Total	9,985*	693	9,292	6,048	1,301	1,943	2,991	715	5,586	2,186	277	6,829	3,161	107	6,024
<i>Minors who have never attended a Day or Evening School.</i>															
Regularly instructed at Home	78	78	..	..	..	..	..	..	..	..	..	..	..	..	..
Attended Sunday School only	337	23	314	118	63	133	47	10	257	21	6	287	91	2	221
Never attended School . .	3,789	..	3,789	..	..	3,789	..	..	3,789	..	..	3,789	..	..	3,789
No information obtained . .	2,464†	2,464	..	..	..	..	..	..	..	..	..	..	..	..	..
Total of Minors .	16,653‡	3,258	13,395	6,166	1,364	5,865	3,038	725	9,632	2,207	283	10,905	3,252	109	10,034
<i>Adults who have attended Day or Evening School . . . }</i>															
Adults who have attended Day or Evening School . . .	14,109	781	13,328	12,164	527	637	8,663	1,061	3,604	9,437	461	3,430	6,319	97	6,912
Never attended School . .	417	..	417	..	..	417	..	..	417	..	..	417	..	..	..
Information not obtained. .	6,706	6,354	352	352	..	..	311	10	31	222	3	127	111	..	241
Total	37,885	10,393	27,492	18,682	1,891	6,919	12,012	1,796	13,684	11,866	747	14,879	9,682	206	17,187

* Of these, 4,640 have left school, and 5,345 are now at school; the attendance of 6,467 was regular; 2,668 was irregular; and of 850, the regularity of attendance was not ascertained.
† Of these, 396 were the children of merchants and professional men; 587 of tradesmen; 781 of operatives; 634 were domestic servants, and 66 were sailors.
‡ Of this number, 5,243 have attended both day and evening school; 3,488 have attended day or evening school only; 257 have attended a boarding school; and 337 Sunday school only.

SUNDAY SCHOOLS.

TABLE I.—*Summary of the Sunday Schools and Scholars.*

Religious Denominations.	Number of Schools.	Scholars on the Books.					Total.	Average Attendance.
		Age.			Sex.			
		Under 5.	Between 5 and 15.	Above 15.	Male.	Female.		
Church Establishment . .	16	113	3,005	61	1,587	1,592	3,179	2,632
Wesleyan	9	178	1,311	194	800	883	1,683†	1,118
Independent	4	5	624	..	306	323	629	469
Baptist	2	3	237	..	105	135	240	178
Catholic	1	10	150	..	95	65	160	130
New Connexion Methodist	1	..	220	..	110	110	220	188
Wesleyan Association . .	1	..	90	..	45	45	90	70
Primitive Methodists . .	1	40	376	..	198	218	416	300
Scotch Church	1	..	20	..	10	10	20	16
Unitarian	1	2	75	16	48	45	93	68
Union, various Denominations	1*	..	70	..	30	40	70	46
Total	38	351	6,178	271	3,334	3,466	6,800	5,215

* Held in connexion with the Floating Chapel.

† Of this number, 138 are adults, attending 2 adult schools.

TABLE II.—*Size of Sunday Schools.*

Number of Schools in which—

The number on the Books does not exceed 100 . .	10
Ditto exceeds 100, and does not exceed 200 . .	13
Ditto exceeds 200	15
	— 38
The average attendance does not exceed 100 . . .	15
Ditto exceeds 100, and does not exceed 200 . .	17
Ditto exceeds 200	6
	— 38

TABLE III.—*Date of Establishment.*

Established	Schools.	Scholars.			Average Attendance.
		Boys.	Girls.	Total.	
In or before 1820	17	1,435	1,581	3,016	2,425
1821 to 1830 inclusive . .	8	871	999	1,870	1,343
Since 1830	13	1,028	886	1,914	1,447
Total	38	3,334	3,466	6,800	5,215

TABLE IV.—*Number of Scholars to a Teacher.*

Denominations.	Not above 10.			From 10 to 25.			From 25 to 100.		
	Schools.	Scholars.	Teachers.	Schools.	Scholars.	Teachers.	Schools.	Scholars.	Teachers.
Established Church	6	1,234	180	4	1,093	85	6	852	27
Wesleyan Metho- dists }	8	1,358	233	1	325	28	..	..	..
Independents . .	4	629	106	..	..	..	..	..	..
Catholic . . .	..	..	..	..	..	..	1	160	2
Other Sects . .	8	1,149	182	..	..	..	..	..	..
Total . .	26	4,370	701	5	1,418	113	7	1,012	29

TABLE V.—*Employment of School Hours.*

Total Time in School.	Time devoted to direct Instruction.				Total Number of Sunday Schools.
	Under 2 hours.	2 and under 3 hours.	3 and under 4 hours.	4 and under 5 hours.	
Under 2 hours . . .	1	..	..	..	1
2 and under 3 hours .	2	..	..	..	2
3 , , 4 hours . .	1	10	11	..	22
4 hours and upwards .	..	..	11	..	11
Total	4	10	22	..	36
Not ascertained .	..	..	..	..	2
Total . .	..	..	..	..	38

TABLE VI.—*Subjects taught in Sunday Schools.*

Subjects.	Schools.	Scholars.			Average Attendance.
		Boys.	Girls.	Total.	
Reading taught in . . .	37	3,286	3,421	6,707	5,147
Reading, Writing, Arith- metic, Grammar, and Geo- graphy taught in . . }	1	48	45	93	68
Religion and Morals taught in (all) }	38	3,334	3,466	6,800	5,215

TABLE VII.—General Conduct of the Schools.

	Number of Schools.	Number of Teachers.	Scholars.	
			Number on the Books.	Average Attend- ance.
Out of the Total Number of .	38	843	6,800	5,215
With Appointed Visitors	14	385	2,403	1,693
With Occasional Visitors	6	154	1,374	1,115
With periodical Examinations . . .	5	166	1,006	645
With occasional Examinations . . .	16	460	3,108	2,438
Upon the National System	7	39	1,052	992
Where the children are questioned upon what they read and learn }	31	795	5,528	4,083
Attached to charity day schools, and con- ducted by the same teachers . . . }	5	7	366	332
Attached to charity day schools, and con- ducted by gratuitous teachers . . . }	5	92	1,441	1,235
Not attached to day schools, and con- ducted by gratuitous teachers . . . }	28	744	4,993	3,648

TABLES VIII. and IX.

Libraries and Societies attached to the Schools.—One School, with 256 Scholars on the books, has a Lending Library and Benefit Society; 6 Schools, with 1,550 Scholars, have a Lending Library and a Clothing Society; 22 Schools, with 4,027 Scholars, have a Lending Library only; 2 Schools, with 488 Scholars, have a Clothing Society only.

Funds from which Books are supplied.—In 34 Schools, with 6,594 Scholars, the books are supplied by subscription; in 3 Schools, with 130 Scholars, from the funds of a Charity; and in 1 School, with 76 Scholars, from the Poor's Rates.

PROCEEDINGS OF THE STATISTICAL SOCIETY OF LONDON.

Sixth Ordinary Meeting, Monday, April 19th, 1841.

THOMAS TOOKE, Esq., F.R.S., V.P., in the Chair.

The following Noblemen and Gentlemen were elected :—

- Viscount Ashley, M.P.
William Baly, Esq., M.D.
The Hon. Hugh Fortescue
John Wilson Esq., M.D.
J. W. Bosanquet, Esq.
Thomas Mann, Esq.

J. S. Pakington, Esq., M.P.
Rt. Hon. Andrew Rutherford, M.P.
Robert Cockburn, Esq.
Bartholomew Bidder, Esq.
William Hutcheson, Esq., M.D.
Joseph A. Dorin, Esq.

The following gentlemen were proposed as candidates for admission into the Society :—

- William H. Tyndall, Esq.
- | William Aldam Jun., Esq.
- Thomas Heywood, Esq.

A paper was read, intituled, “ Statistical Account of the Ancient Prescriptive Jurisdictions over the Thames possessed by the Corporation of London,” by Joseph Fletcher, Esq., (see p. 99.)

Seventh Ordinary Meeting, Monday, May 17th, 1841.

Sir CHARLES LEMON, BART., M.P., V.P., in the Chair.

The following gentlemen were elected :—

- William H. Tyndall, Esq.
- | William Aldam, Jun., Esq.
- Thomas Heywood, Esq.

Charles R. Walsh, Esq., was proposed as a candidate for admission into the Society.

A letter was read from M. Moreau de Jonnès, communicating a list of the principal Statistical works which have recently appeared in France.

The following papers were read:—

1. Statement of the Effects of the Metropolitan Police Act, closing Public Houses on Sunday morning.
2. Number and length of Railways entirely or partially open in the United Kingdom, (*see below*).
3. Results of the New Postage Arrangements, by Rowland Hill, Esq., F.S.S. (*see p. 85*).

Eighth Ordinary Meeting, Monday, June 21st, 1841.

Charles R. Walsh, Esq., was elected a Fellow of the Society.

The following gentlemen were proposed as candidates for admission into the Society:—

G. A. Walker, Esq. | H. P. Davies, Esq.
J. M. Hitch, Esq., M.D.

A paper was read “On the Statistics of the Newspaper Press,” by Mr. P. L. Simmonds (*see p. 111*).

MISCELLANEOUS.

List of the Railways in the United Kingdom for which Acts of Parliament have been obtained, with the Total Length of each Line when complete, and the Length open on 1st July 1841.

Name of Railway.	Length of Line Open.		Total Length.	
	Miles.	Ch.	Miles.	Ch.
Arbroath and Forfar	15	15	15	15
Aylesbury	7	0	7	0
Ballochney	8	23	8	23
Birmingham and Derby Junction	38	68	38	68
Ditto and Gloucester	51	30	51	30
Bolton and Leigh	10	0	10	0
Ditto and Preston	14	53	14	53
Brandling Junction	15	20	15	20
Bristol and Exeter	33	0	76	10
Canterbury and Whitstable	6	0	6	0
Cheltenham and Great Western	17	40	42	0
Chester and Birkenhead	15	0	15	0
Ditto and Crewe	20	44½	20	44½
Clarence	35	40	35	40
Dundee and Arbroath	16	5	16	5
Ditto and Newtyle	10	20	10	20
Dublin and Kingstown	6	0	6	0
Ditto and Drogheda . . . . .	..	..	30	0
Ditto and Kilkenny . . . . .	..	..	75	0
Durham Junction	7	0	7	0
Ditto and Sunderland	16	0	16	0
Eastern Counties	17	40	125	23

Name of Railway.	Length of Line Open.		Total Length.	
	Miles.	Ch.	Miles.	Ch.
Edinburgh and Dalkeith	8	20	8	20
Ditto Branch to Leith	4	0	4	0
Edinburgh and Glasgow . . . .	..		46	45
Ditto Leith and Newhaven . . .	..		2	20
Gosport Junction to South Western .	..		16	0
Glasgow and Garnkirk	8	20	8	20
Ditto Paisley and Greenock . . .	22	22	22	22
Ditto Ditto and Ayr	40	6	40	6
Grand Junction	82	51	82	51
Great North of England	44	30	74	19
Great Western	117	60	117	60
Hartlepool Dock and Railway . . .	15	0	15	0
Hull and Selby	30	11	30	11
Lancaster and Preston	20	30	20	30
Llanelly Railway and Dock	17	0	17	0
Leeds and Selby	20	0	20	0
Liverpool and Manchester	30	53	30	53
Leicester and Swannington	16	5	16	5
London and Brighton	34	0	41	30
Ditto and Birmingham	112	40	112	40
Ditto and Blackwall	3	20	3	20
Ditto and Greenwich	3	60	3	60
Ditto and South Western	76	40	76	40
Ditto and Croydon	10	20	10	20
Manchester and Birmingham	5	40	45	52½
Ditto Bolton, and Bury	10	0	10	0
Ditto and Leeds	49	76	49	76
Maryport and Carlisle	10	0	28	3½
Midland Counties	49	20	49	20
Monkland and Kirkintilloch	12	0	12	0
Newcastle and Carlisle	61	70	61	70
Ditto and North Shields	6	60	6	60
Northern and Eastern	15	0	30	0
North Midland	72	29	72	29
North Union	22	1	22	1
Paisley and Renfrew	4	40	4	40
Preston and Wyre	19	40	19	40
Sheffield and Manchester . . . . .	..		40	66
Ditto and Rotherham	5	20	5	20
South Eastern . . . . .	..		66	14
Stanhope and Tyne	34	0	34	0
Stockton and Hartlepool	8	20	8	20
Ditto and Darlington	25	30	25	30
Taff Vale	24	0	24	0
Thames Haven . . . . .	..		15	20
Ulster	7	0	35	0
Wishaw and Coltness	6	40	6	40
Whitby and Pickering	24	0	24	0
York and North Midland	23	50	23	50
Total	1,581	62	2,187	55

The total number of Railways is 71, of which 54, in length 1,398 miles, are wholly open; 9 are partially open; of which the total length is 497 miles, and 183 miles are open; 7, whose length is 292 miles, are not commenced, or not yet open in any part of their line.

An Account of the Quantities of Foreign and Colonial Wheat and Wheat-Flour Imported, Paid Duty, and Remaining in Warehouse, in each of the Months ended 5th April, May and June, 1841.—(Continued from p. 82.)

Months ended	WHEAT.			WHEAT-FLOUR.		
	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.
	Qrs.	Qrs.	Qrs.	Cwts.	Cwts.	Cwts.
5th April .	10,443	1,131	116,518	67,171	27,567	203,501
5th May .	91,155	76,500	127,991	55,162	38,387	207,802
5th June .	328,659	116,180	337,926	99,973	25,025	273,748

Quarterly Averages of the Weekly Liabilities and Assets of the Bank of England, in the Quarters ended 30th March, 27th April, 25th May, and 22nd June, 1841, and in the corresponding Quarters of the preceding Year.—(Continued from p. 82.)

Quarters ended	LIABILITIES.			ASSETS.		
	Circulation.	Deposits.	Total.	Securities.	Bullion.	Total.
1840.	£.	£.	£.	£.	£.	£.
31st March .	16,818,000	7,704,000	24,522,000	23,113,000	4,360,000	27,473,000
28th April ..	16,831,000	7,296,000	24,127,000	22,726,000	4,318,000	27,044,000
26th May ...	16,817,000	7,226,000	24,043,000	22,556,000	4,386,000	26,942,000
23rd June ..	16,871,000	7,122,000	23,993,000	22,402,000	4,434,000	26,836,000
1841.						
30th March .	16,537,000	7,212,000	23,749,000	22,328,000	4,339,000	26,667,000
27th April ..	16,537,000	7,225,000	23,812,000	22,082,000	4,638,000	26,720,000
25th May ...	16,615,000	7,242,000	23,857,000	21,817,000	4,921,000	26,738,000
22nd June ..	16,632,000	7,218,000	23,850,000	21,601,000	5,098,000	26,699,000

Aggregate Amount of Notes circulated in England and Wales by Private Banks, and by Joint-Stock Banks and their Branches, respectively, in each of the Quarters ended 26th December, 1839-40, and 27th March, 1840-41.—(Continued from p. 82.)

Quarters ended	1839-40			1840-41		
	Private Banks.	Joint Stock Banks.	Total.	Private Banks.	Joint Stock Banks.	Total.
	£.	£.	£.	£.	£.	£.
26th Dec. ...	7,251,678	4,170,767	11,422,445	6,575,838	3,798,155	10,373,993
27th March .	6,893,012	3,940,232	10,833,244	6,322,579	3,644,258	9,966,837

An Abstract of the Net Produce of the Revenue of Great Britain, in each of the Years and Quarters ended 5th April 1840 and 1841.

Description.	Years ended 5th April			
	1840	1841	Increase.	Decrease.
	£.	£.	£.	£.
Customs	20,001,267	19,700,225	..	301,042
Excise	12,040,737	12,530,036	489,299	..
Stamps	6,592,396	6,755,118	162,722	..
Taxes	3,714,412	3,989,431	275,019	..
Post-Office	1,247,000	414,000	..	833,000
Crown Lands	160,000	160,000	..	..
Miscellaneous	88,245	90,062	1,817	..
Imprest and other Monies	416,956	445,576	28,620	..
Repayments of Advances.	724,153	591,438	..	132,715
Total Income . . .	44,985,166	44,675,886	957,477	1,266,757

Description.	Quarters ended 5th April			
	1840	1841	Increase.	Decrease.
	£.	£.	£.	£.
Customs	4,572,623	4,518,508	..	54,115
Excise	1,929,996	1,885,470	..	44,526
Stamps	1,658,188	1,677,404	19,216	..
Taxes	179,058	222,045	42,987	..
Post-Office	120,000	93,000	..	27,000
Crown Lands	40,000	32,500	..	7,500
Miscellaneous.	37,180	49,126	11,946	..
Imprest and other Monies	31,913	32,151	238	..
Repayments of Advances.	110,756	98,996	..	11,760
Total Income	8,679,714	8,609,200	74,387	144,901

Total Decrease on the Year, £309,280: Total Decrease on the Quarter, £70,514.

An Abstract of the Income and Charges of the Consolidated Fund, in each of the Quarters ended the 5th of April 1840 and 1841.

INCOME.			CHARGE.		
Description.	Quarters ended 5th April		Description.	Quarters ended 5th April	
	1840	1841		1840	1841
	£.	£.		£.	£.
Customs	3,839,464	3,527,826	Permanent Debt . . .	3,541,638	3,537,130
Excise	1,950,212	1,905,048	Terminable Annuities .	1,395,532	1,351,551
Stamps	1,658,188	1,677,404	Interest on Exchequer	22,960	23,847
Taxes	179,058	222,045	Bills		
Post-Office	120,000	93,000	Sinking Fund	96,801	97,047
Crown Lands	40,000	32,500	Civil List.	330,174	337,592
Miscellaneous	37,180	49,126	Other Charges	279,850	282,050
Imprest and other Monies	31,913	32,151	Charge for Advances .		
Repayments of Advances	110,756	98,996			
Total	7,966,771	7,638,096	Total Charge.	5,666,955	5,629,217
Cash applied to pay off } Deficiency Bills . . . }	230,000	220,000	Total Surplus	2,529,816	2,228,879
Total Income . . .	8,196,771	7,858,096	Total.	8,196,771	7,858,096

An Analysis of Bankruptcies in England and Wales, shewing the Counties and Trades in which the same occurred, during each Month from April to June, 1841.—(Continued from p. 84.)

COUNTIES.	April.	May.	June.	TRADES.	April.	May.	June.
Bedford . . .	..	1	1				
Berks . . .	1	3	..				
Bucks . . .	1	..	..		
Cambridge . .	2	..	..	<i>Persons connected with</i>			
Chester . . .	1	4	1	<i>Manufactures.</i>			
Cornwall . . .	..	..	..	
Cumberland . .	..	..	1	Cotton Trade	3	8	5
Derby . . .	..	..	2	Woollen do. . . . .	..	1	..
Devon . . .	3	2	..	Silk do. . . . .	..	3	1
Dorset . . .	1	..	..	Linen do.	2	..	..
Durham . . .	2	3	2	Iron Foundry . . . .	..	1	2
Essex . . .	2	2	..	Metal Wares	4	1	5
Gloucester . .	6	7	8	Building Trades . . .	4	4	4
Hants . . .	1	1	1	Miscellaneous	14	14	10
Hereford . . .	3	1	..				
Hertford . . .	1	1	..				
Huntingdon . .	..	..	..	
Kent . . .	3	3	3	<i>Agriculture.</i>			
Lancaster . . .	20	26	15				
Leicester . . .	2	1	3	Farmers	1	1	..
Lincoln . . .	3	1	2	Corn, Hay, and Hop			
Middlesex . . .	27	23	16	Dealers, Millers . .	8	2	4
Monmouth . . .	1	1	..	Cattle and Wool Dealers.	3	4	..
Norfolk . . .	..	3	1	Coaches and Horses. .	..	1	1
Northampton .	..	..	..	Brewers, Maltsters, and			
Northumberland	3	1	8	Distillers	4	5	2
Nottingham . .	2	1	..				
Oxford . . .	..	..	..	
Rutland . . .	..	..	..	<i>Other.</i>			
Salop . . .	..	1	1				
Somerset . . .	2	3	3	Innkeepers, Victuallers,			
Stafford . . .	6	6	4	and Wine and Spirit			
Suffolk . . .	2	1	..	Merchants	23	9	9
Surrey . . .	1	7	2	Merchants, Bankers, Ware-			
Sussex . . .	1	1	..	housemen, Agents, Bro-			
Warwick . . .	7	4	3	kers, Shipowners, and			
Westmoreland .	1	..	..	Wholesale Dealers . .	20	18	17
Wilts . . .	2	..	..	Tradesmen, Shopkeepers,			
Worcester . . .	1	1	1	and Retail Dealers . .	37	48	28
York . . .	16	12	12	Miscellaneous	6	3	7
Wales . . .	5	2	5				
Total in 1841 .	129	123	95	Total in 1841 . .	129	123	95
,, 1840 .	119	111	113				

QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

OCTOBER, 1841.

Eleventh Meeting of the British Association for the Advancement of Science. Held at Plymouth, July, 1841.

THE Eleventh Meeting of the British Association for the Advancement of Science, was held at Plymouth during the week commencing on Thursday, the 29th July, and terminating on Wednesday, the 4th September.

The following is a list of the Officers and Committee of the Statistical Section :—

President.—Lieut.-Colonel Sykes, F.R.S., F.S.S., &c.

Vice-Presidents.—Professor A. Quetelet, F.R.S., Foreign Mem. S.S.; Viscount Ebrington, M.P., F.S.S.; Leonard Horner, Esq., F.R.S., F.S.S.; Rev. — Hore.

Secretaries.—Rev. E. Byrth, D.D., Rev. R. Luney, M.A., Rawson W. Rawson, Esq., F.S.S.

Committee.—J. Bowring, LL.D., M.P., F.S.S.; Captain Creyke, R.N.; Edward Dent, Esq.; D. Derry, Esq.; Lord Francis Egerton, M.P.; C. B. Fripp, Esq.; Webb Hall, Esq.; James Heywood, Esq., F.R.S., F.S.S.; Sir C. Lemon, Bart., F.R.S., F.S.S.; Captain T. Locke Lewis, R.E., F.R.S.; Edward Moore, Esq.; William Neild, Esq.; Rev. W. J. Odgers; Lieut.-Colonel P. W. Pedler; H. J. Porter, Esq., F.S.S.; Colonel Hamilton Smith, F.R.S.; John Taylor, jun., Esq.; W. C. Taylor, LL.D.; Robert Wallace, Esq., F.S.S.; H. Woolcombe, Esq.

The following papers were read before the Section :—

Thursday, 29th August.

1. Statistics of the three Towns of Plymouth, Stonehouse, and Devonport, by H. Woolcombe, Esq. (See p. 183.)
2. Statistics of Sheffield, by a Local Committee.

Friday, 30th August.

1. Report of the State of the Polytechnic School in Paris. Presented by James Heywood, Esq., F.R.S., F.S.S. (See p. 228.)
2. A Statistical Account of Loan Funds in Ireland for the Year 1840. By H. J. Porter, Esq., F.S.S. (See p. 209.)
3. Notification from Professor Quetelet, on the Establishment of a Statistical Department by the Government of Belgium. (See p. 224.)
4. Return of the Incomes of Literary and Scientific Societies in England, in the Year 1840. By Arthur Ryland, Esq.*

* To appear in a future Number.

Monday, 2nd April.

1. Letter from Mrs. Davies Gilbert on the Economical Results of Spade Husbandry, and the advantages of the small Allotment System.
2. Notes on the Agricultural Produce of Cornwall, by Sir C. Lemon, Bart., F.R.S., V.P.S.S. (See p. 197.)
3. Report on the State of the Population in Hull. By the Statistical Society of Manchester.*
4. Report on the Educational Statistics of Bristol. By the Statistical Society of Bristol. (See p. 250.)

Tuesday, 3rd April.

1. A Comparative Account of the Income and Expenditure of certain Families of the Working Classes in Manchester, in the years 1836 and 1841. By William Neild, Esq., Mayor of Manchester.*
2. A Statistical Account of the Monts de Piété of Rome, Paris, and other European Cities. By H. J. Porter, Esq., F.S.S.*
3. Communication from Professor Quetelet upon the various Influences of the Seasons, and their bearing upon the several branches of Science, and particularly upon that of Statistics.*
4. Annual Stipends of the Established Clergy in the Shires of Roxburgh, Berwick, and Haddington, by J. Wilson, Esq., of Thornlie.*
5. Economical Statistics of Sheffield, by a Local Committee.

The Committee of the Section passed the following resolutions relative to the recommendations of grants for the pursuit of inquiries into statistical subjects:—

1. That the renewal of the grant to a Committee, appointed last year, to inquire into the Statistics of the British Coal Fields, be not recommended, as the Government has taken the subject into their own hands.
2. That the renewal of a grant to the Committee for inquiring into the state of Schools, be not recommended.
3. That the Committee appointed at Glasgow for the furtherance of an inquiry into Vital Statistics, consisting of Lieut.-Colonel Sykes, Viscount Sandon, M.P., Messrs. W. P. Alison, M.D., R. Cowan, M.D., G. R. Porter, James Heywood, E. Chadwick, A. Watt, and J. C. Colquhoun, be requested to continue their labours; and that it be recommended that the sum of 150*l.* be placed at their disposal for this purpose.
4. That it be recommended that the sum of 100*l.* be placed at the disposal of a Committee, consisting of Lieut.-Colonel Sykes, Sir C. Lemon, Bart., W. P. Alison, M.D., Messrs. C. B. Fripp and James Heywood, for the encouragement of inquiries into the condition of the population in one or more large towns, considered merely as to numerical analysis.
5. That a Committee, consisting of Viscount Ebrington, M.P., H. J. Porter, Esq., Dr. Patterson, and Captain Portlock, R.E., be requested to inquire into the operation of Loan Funds and Monts de Piété in Ireland, and to report thereupon at the next meeting of the Association; and that it be recommended that a sum of 50*l.* be placed at their disposal for this purpose.

Of the above three proposed grants, the first only, relating to Vital Statistics, was sanctioned by the Committee of Recommendations, and consequently it was the only one confirmed. The other two were withdrawn.

The next meeting of the Association will be held at Manchester in the month of June.

* To appear in a future Number.

Statistics of the three Towns of Plymouth, Stonehouse, and Devonport.
By HENRY WOOLCOMBE, Esq.

[*Read before the Statistical Section of the British Association, 29th July, 1841.*]

I AM desirous of offering some acknowledgment to the British Association for the distinguished honour they have conferred on our towns by making them the place for assembling their members in the present year; a selection which, I dare believe, they will not regret, when they have made themselves acquainted with the nature and extent of the establishments of our government, connected with the naval department at this port, as this visit will enable them to do. They cannot fail to perceive that in our arsenal all that science could have suggested has not been adopted, and is not in use; that the introduction of machinery has very recently taken place, and to a very limited extent only; that the facility of transmitting ponderous bodies by railways is not practised, and that various other facilities, now commonly used in private manufactories, are not to be found in this national establishment.

The Association will behold all that nature has done for our neighbourhood, and will perceive how much art may improve those benefits, if the inhabitants possessed the power and the inclination to avail themselves of the modern inventions of scientific men, by which other parts of the kingdom have made such rapid strides in the march of improvement.

They will no doubt visit with intense interest the great work which has been constructed to render our port accessible at all times, and by which a safe anchorage has been provided amidst the most violent storms; but they will learn with regret that so great a work has been undertaken, without an opportunity having been afforded to men of science generally, to give their opinion on the probable effects of such a structure within the harbour. They will perceive that the preservation of such a harbour is of national importance; and the greatest talents will be well applied in watching the progress of any injury to it, and in suggesting any remedies.

If, then, our country may be generally benefited by this one of its naval establishments becoming better known to men of great scientific attainments, and our inhabitants be inspired with a like spirit of improvement to that which distinguishes our northern countrymen; the Association, in fulfilling their desire, to diffuse knowledge, and to render that knowledge subservient to practical improvements, will not regret having assembled at this naval arsenal in the west of England.

I shall endeavour in the following pages to trace the rise and progress of this port, and to shew how, in connexion with the history of our country, it has grown to its present size and importance; I shall also investigate and exhibit, in a statistical point of view, some of the wants of its numerous population; and it cannot be uninteresting to the Association to have it shewn how much the present prosperity of the town is indebted to the talents and abilities of scientific men.

It will appear in the first place, that even the most ancient of our three towns, Plymouth, cannot boast of any great antiquity; that the far greater part of Plymouth and Stonehouse, and the whole of Devonport, is of very recent origin; that the increase of the population, and the extension of building cannot be ascribed to the influx of commercial wealth or of any considerable manufactures, as has been the case with many of the

great towns in other parts of the United Kingdom; but unquestionably their present size and importance is to be attributed entirely to the excellence of the harbours comprised within the port of Plymouth; to the numerous Government establishments which have hence arisen on the shores of those harbours, and to the vast sums annually expended by the Government of the country in the founding and supporting those institutions.

There is no trace of any Roman settlement in any part of the port, though some Roman, as well as ancient British, coins have been recently dug up and discovered at Mount Batten, in the harbour of Catwater; nor does it appear that any town or village existed in any part of it during the Anglo-Saxon æra. At the time of the compilation of Domesday, the place is described by its then name of Sutton as a mere hamlet, containing a few inclosures, inhabited by a small number of free inhabitants, and some borderers and serfs holding in demesne of the king.

In the reign of Henry I. we find the Manor of Sutton existing here, the Crown having granted it to the Valletort family, of Norman origin, who had extensive possessions granted them in this county; and this manor was ever after distinguished by the name of this family, to distinguish it from one of the same name belonging to the prior and canons of the Monastery of Plympton, which thence acquired the name of Sutton-Prior. Under the auspices of this fraternity the town seems to have arisen; by them the first church was erected, the grant of the market procured, the institutions of a civil government commenced, by the appointment of a portreeve, bailiffs and constables, and a court-leet held, where offences were tried and punishments inflicted; and thus a frame of society was constituted fitted to supply the immediate wants of the inhabitants.

As a place of naval resort the port is first mentioned towards the latter end of the reign of Edward I., when a fleet of 325 vessels assembled here under the command of Edmund Earl of Lancaster, the king's brother. This is the first instance on record of any fleet collecting at this port, and from this and other circumstances it may be inferred that a town of some size existed here at that time, especially as it appears that in the 26th year of the same reign it was called upon to send its deputies to the parliament then convened at Westminster, which it continued to do in that and the succeeding reigns, though with occasional long intermissions. All these returns were made in the name of the borough of Sutton, but the name of Plymouth is found to have been used in the reign of Edward I., in a writ from the king, and in that of Edward III. the name of Plymouth is in frequent use.

In the latter reign the town seems to have rapidly increased, since it was of sufficient importance to draw down on it the fury of its enemies, the French having burned a great part of it in 1339. This calamity, however, seems to have inflicted no permanent injury on the town, as nine years afterwards, the port of Plymouth (probably including Saltash, Milbrook, &c.) provided 26 ships and 603 mariners for the king's fleet, with which, in 1346, His Majesty blockaded Calais; and a few years afterwards, in 1354, the Black Prince embarked here with a large fleet for France, and re-landed here in 1355, with John the King of France, his prisoner, after the battle of Poitiers. All these events lead to the conclusion, that both ships of war and transports, with their provisions,

and the muniments of war, could be procured here; and they further imply that the town was capable of affording accommodation to men of rank and their attendants.

Indeed, by this time, many ecclesiastical communities of the Augustine, Dominican, and Cistercian Orders had built houses here, and no doubt in these, as well as at the rich monastery of Plympton, then easily accessible by water, lodging and entertainment was procured. That much progress in population had now been made is further confirmed by the fact, that in the year 1377, the last year of the reign of Edward III., when the population of the towns of England was imperfectly ascertained in consequence of Acts of the Parliament imposing a poll-tax, and when, therefore, no inducement was held forth to exaggerate the number, the returns, still extant, of Plymouth state that it contained 7,000 inhabitants, there being at that time, according to this return, only three towns in England which possessed a larger population, viz., London, York, and Bristol. And yet, notwithstanding this statement, in less than 40 years afterwards, a great change apparently had taken place, owing either to another foreign invasion, which occurred in the reign of Henry IV., having much dilapidated it, or to one of those visitations of sickness, which were then frequent, having depopulated it; for in the reign of Henry V., 1414, it did not send representatives to Parliament, when Exeter, Plympton, Totnes, Tavistock, Barnstaple, and Dartmouth possessed that privilege.

In the reign of Henry VI., 1439, it was incorporated by an Act of Parliament and a charter from the king, and continued, with some occasional alterations, a corporate body, under the same constitution, for 400 years, until the recent reformation of boroughs; and from that period until the present day it has regularly sent two members to the House of Commons.

In the reign of Henry VII., the first notice occurs of any attention being paid to the subject of education, and then it was confined to the higher classes; but, in the year 1501, it is recorded that Thomas Brooke was appointed by the corporation a master to teach grammar and writing to the children who were natives and inhabitants of the town, and a salary of 10*l.* a-year given to him, with a lodging over the chapel, which was itself converted into a school-house.

In the next reign vast changes must have taken place in consequence of the suppression of so many monasteries and ecclesiastical communities in the town and its vicinity, especially as their liege lord, the Prior of Plympton, was removed from his office and jurisdiction; although his removal was probably acceptable both to the corporation and inhabitants, as many long and bitter disputes and contentions had arisen between them. At this period there were many wealthy merchants residing here; amongst them William Hawkins (the father of the celebrated Sir John and Sir Richard Hawkins), and many others.

In the reign of Elizabeth the port became of higher renown, being not only found convenient as a rendezvous for the large fleets collected to oppose the intended Spanish invasion, but as the port from which many voyages of discovery were fitted out under Drake, Oxenham, Parker, and Cox. Here also, too, probably commenced that inhuman traffic, still the disgrace of Christendom, of transporting the ill-fated inhabitants of the Coast of Africa to the West Indies, and consigning

them to slavery; for, in 1577, vessels were fitted out at this port for the Coast of Guinea, whence they proceeded to the British settlements in the West Indies, then recently captured from the Spaniards.

At this time also the representatives of Plymouth in Parliament were men eminent for their public services, such as Sir John Hawkins, Sir Francis Drake, Sir Humphrey Gilbert, Sir Walter Raleigh, Mr. Thomas Cavendish, Sir Richard Hawkins, Sir Richard Grenville, and others, who, if not its representatives, were members of its corporation, inhabiting the town, and therefore tending to effect in the manners and condition of the citizens a degree of improvement which did not previously exist. At the time of the expected arrival on the coast of the Spanish Armada, Lord Howard, the admiral of the fleet, and many noblemen and gentlemen of rank were assembled here.

In this, and the succeeding reign, a great stimulus to adventure was given by the constant equipment of fleets for founding settlements in the then recently discovered continent of America, whereby the talents and industry of the inhabitants must have been greatly excited. Raleigh was engaged in transporting inhabitants to Virginia. Many of our country gentlemen, the Drakes, Raleighs, Gilberts, and others, were founding settlements in New England, and had already named a place there New Plymouth, this and other settlements being effected by a chartered company, called "the Plymouth Company."

From all these circumstances the port became well known, and the town increased in size and importance. Nothing tended more to promote this than a measure devised and executed by Sir F. Drake, though at the expense of the corporation, namely, of supplying the inhabitants and shipping with water, derived from the river Mew, in the vicinage of Dartmoor, and conducted by a channel in a circuit of 25 miles to the town, which has ever since provided the inhabitants with a copious supply of that essential element.

In 1630 the first institution was raised here to meet the exigencies of the poorer classes of society, which was therefore denominated the Poor's Portion. The object of this establishment was to provide work for the industrious who were out of employ; to compel the idle and vicious to labour; to provide an asylum for the aged, and a refuge for the temporarily sick. These efforts of the benevolent, though frequently disappointing the designs of their founders, yet mark the growing attention of the higher classes to the wants of the lower. A few years previously, in 1625, a most admirable charity had also been erected for the reception of orphans of persons resident in the town, who were received into a house, clothed, educated, and finally bound apprentices to some profitable trade. Some commendable care seems also to have been paid to the spiritual wants of the inhabitants as well as to their worldly interests; for in 1640, the town was first divided into two parishes, and measures were taken for the erection of another church, the present Charles's Church: but the political events which took place at this time put an end for a while to the progress of all these benevolent measures.

The unhappy contests which commenced in the reign of Charles I. between the king and the parliament did not fail to agitate Plymouth, which, like most of the other corporate towns in the kingdom, took the

popular side with the parliament, and successfully resisted the king's army in its various attacks on the town. The gentry of the country, here as elsewhere, generally supported the king and his prerogative. In such a ruinous contest, pregnant with evil to all, it was impossible that either wealth or population could increase, trade or commerce prosper, or any improvements be effected in the condition of society. One of the unhappy results of this miserable warfare was the conversion of St. Nicholas's Island into a state prison: for after the restoration of Charles II. many of the regicides were confined here, and amongst them the celebrated Colonel Lilborne and Major-general Lambert, the latter of whom terminated his days there after a miserable confinement of fifteen years.

During the reign of Charles II. this place attracted more attention from the government, but with no enlightened view as regards its appropriation as a naval arsenal or a commercial port, but rather as a depôt of arms where His Majesty might have a fortified position for a concentration of troops and a deposit of arms and military machines; and also to act as a salutary check on his good town of Plymouth, if, as in his father's reign, republican principles should again predominate amongst its inhabitants. With these views the citadel of Plymouth was constructed, and its progress occasioned two royal visits from Charles and his brother the Duke of York.

We now arrive at a period when the capabilities and natural advantages of the port began to be developed. Early in the reign of William III. the navy estimates for the year 1690, laid before Parliament, contained a charge for building a dock at Plymouth; and in the following year it appears from local chronicles that the dock in Hamoaze was begun. From this year, therefore, may be dated the origin of this great naval arsenal, in which have been built and equipped so many of those mighty fabrics that have contributed so materially to the splendour and glory of our history, the safety and preservation of our country.

It may appear somewhat unaccountable, that a harbour so peculiarly fitted for a naval arsenal had so long remained unnoticed by the government of the country, especially when it is known that its natural advantages had been forcibly pointed out in a pamphlet published by the acute and intelligent Sir Walter Raleigh nearly a century before; and the importance of its local position had not been overlooked by the keen penetration and foresight of that statesman, who judiciously displayed all its capabilities, and shewed the expediency of having an arsenal on the western shores of the kingdom, as it was very possible, as he states, for our enemies, having a superior fleet in the Channel, to blockade the mouth of the Thames, and completely impound all our fleet then stationed at the principal arsenals in the Thames, which were London, Deptford, Woolwich and Chatham; and this suggestion was afterwards too fatally realized in the reign of Charles II., when the Dutch fleet insulted our shores and disgraced our arms, whilst they remained triumphant at Chatham.

In 1696 a most memorable work was commenced, as far as regards the safety and prosperity of our port,—memorable also as displaying a remarkable instance in which science has enabled man to overcome the difficulties and dangers, which the natural formation of the earth has placed in his path. A ridge of rocks, at the very entrance of the port,

had rendered it very unsafe for the approach of vessels in the night, or during the prevalence of fogs or tempestuous weather, and many and frequent were the shipwrecks that took place on the Eddystone Rocks. It had been therefore a desideratum for many years to erect a beacon on those rocks, not only to warn the mariner of his approach to danger, but also to guide him, amidst darkness and the war of the elements, into safety in the hour of his peril. — Winstanley, an eminent man, a gentleman of Essex, first attempted this important work, and in four years he constructed an edifice which answered every purpose whilst it endured, but its continuance was very limited. In 1703 the building was assailed by that tremendous storm, which has been ever since emphatically styled “the Great Storm,” and in it, either by the electric fluid, or the resistless sea, or by both, the architect and his magnificent work were swept away. Four years of danger and difficulty elapsed before an attempt was made to reconstruct a lighthouse on these rocks; but in 1707 a Mr. Rudyerd, of London, proposed to undertake the task, which he succeeded in accomplishing, but having employed a vast deal of timber in its erection, the roof of the building, where the light was exhibited, accidentally caught fire in the night, and the whole fabric was consumed, after having stood for 48 years.

But now arose a man of superior genius, capable of gaining by the experience which his predecessors had afforded him. The great Smeaton understood how to encounter the winds of heaven and the waves of the ocean, and by evading, and not opposing their resistless force, he constructed a building which the waves in vain assail, for they meet with no resistance; they attack it again and again, but pass away without leaving a trace of their power; the winds cannot move it, for it is not designed to resist them, they pass unheeded by; and now, by the aid of Franklin, the electric fluid passes by conductors innoxiously to the earth. Thus, by the aid of science, man is enabled to look forth from this structure amidst the war of the elements that might appal the stoutest heart, yet feels himself secure, whilst guiding seamen far from danger, into the harbours of security. Such are the triumphs of science! Such are the benefits man derives from its cultivation! Smeaton, however, remains unrewarded by his government or his countrymen—undistinguished by *any monument erected* by them; but he has himself raised one to his memory surpassing in probable durability all that wealth or titles could have bestowed.

From the period of the foundation of the dock-yard in this harbour, Devonport, by its then name of Plymouth Dock, must date its rise, whilst the borough of Plymouth, the towns of Stonehouse and Stoke must ascribe to its establishment their prodigious increase in buildings, population, and wealth. Numerous topographical works furnish ample information on these heads, to which I would refer the curious reader for further details; but I may mention that the establishment of a dock-yard has necessarily drawn around it, in the lapse of a century and a half, various great appendages, such as a victualling-office, a gun wharf, a naval hospital, a powder magazine, a station for the Plymouth division of Royal Marines, and barracks for the troops, which, as a garrison town, are stationed here for its protection. The expenditure of so much money in raising these edifices, as well as the annual expenditure in pay, wages, and prize-money, has thus mainly contributed to produce

the present state of the towns ; but in 1812 the attention of the Government being thus drawn to the port, and its defects becoming more apparent, as well as the power of remedying them, a mighty work was commenced, to which I have already referred—the Plymouth Breakwater. Of its success in effecting a safe roadstead in the sound of Plymouth there can be no question, but doubts are entertained whether its position and inclination is such as to insure the continuance of the same depth of water within the structure as previously existed there.

The design is that of Mr. Rennie, a civil engineer of undoubted eminent talents, and the execution was entrusted to Mr. Whidbey, well known as an able nautical man, but not educated as a civil engineer. The lapse of time will alone shew how far these apprehensions are well founded, and it is consolatory to know that if the evils anticipated do occur to any extent, they are not without remedy.

May these apprehensions, however, be as ill founded as those I am now about to advert to ! The prosperity of our port was conceived at one time to be dependent entirely on the country's being involved in warfare, and it did appear, during the last century, as if there was some truth in this apprehension ; but whether this was so or not at the time referred to, the experience of 25 years refutes the truth of the position at the present time ; and it is a glorious reflection to indulge in, that the prosperity of the towns is not dependent on a state so productive of evil to others as national warfare. A few details will serve to prove the accuracy of this statement. With regard to Plymouth, it will scarcely admit of a question ; not only is the population increased since the peace of 1816 from 20,000 to 36,000, but the number of dwelling-houses of a superior class in the new squares, crescent, and terraces, surpass anything that previously existed ; places of public worship have increased, and are increasing, though still inadequately ; charitable institutions are considerably, though not sufficiently, augmented ; scientific institutions have arisen which were before unknown ; the roads have been improved and lighted in a manner not previously practised ; and all these indications of general prosperity, and almost all these ameliorations, have been produced in a time of peace.

The sister towns must be considered to be more dependent on the expenditure of the Government ; and if the increase of population in Stoke Damerel and Stonehouse, which has been very great, be not admitted as a test of prosperity, inasmuch as the former is now found to have receded in population, and the latter to have increased but in a trifling degree ; yet it must be remembered that they also have public institutions and charitable endowments to appeal to, which must be received as an index of increased wealth. And if, as must be admitted, the fortunes of individuals are not so rapidly accumulated as during the war, yet they are not without many living instances of gentlemen having retired from the exercise of their professions and trades ; and these towns also discover in their public buildings, as well as in their domestic architecture, a great increase of taste and durability ; and in the latter of elegance and comfort. The site of the village of Stoke naturally draws to it the opulent inhabitants of Devonport, who enjoy in pure air, in extensive sea and land views, and in noiseless seclusion, the luxuries which no populous town can afford.

It has been already stated, that Plymouth can in no respect be deemed

a commercial port, so as to approach to a comparison with the greater places of trade in the United Kingdom. Among those, however, in the West of England, it stands high, as indeed it does amongst all the secondary commercial ports of the kingdom; so large a population necessarily requiring a large importation of all the necessary articles of food, clothing, and domestic furniture; and, as a depôt for corn, timber, coals, wines, and dry fruits, for the supply of the western counties, it has greatly increased of late years. Another cause which swells the amount of customs dues received at this port is, that the Government pays to that branch of the revenue the duties on all timber and other supplies required for the dock yard, and other establishments. There is scarcely any large foreign trade, though some enterprising merchants import sugars from the West Indies, and timber from Canada and the Baltic. But the most material impediment to this port carrying on an extensive commerce is the deficiency of exports; Devon ceased to be a manufacturing county to any extent when the use of machinery in the northern counties rendered steam products so much cheaper than those produced by mere manual labour. There are no iron foundries beyond what are necessary for the local supply; and the natural productions of minerals, granite, lime-stone, marble, china-clay, slate, and fish, though extremely valuable in themselves, and of aggregate importance, yet are not of sufficient magnitude to constitute a balance to the imports. Notwithstanding these drawbacks, the duties paid at the custom-house during the last official year amounted to 135,930*l*.

It has been observed, and apparently with some truth, that one cause of a deficiency of capital in the neighbourhood is, that those families whose ancestors acquired wealth and independency from the exercise of trade, were very soon contented with their acquisitions, and sought ease in the retirement of a country life, rather than continue the accumulation of riches amidst the anxiety and turmoil of commercial speculation. Such a choice, however commendable in individuals, must have the effect of limiting and restraining trade, whose sons in Liverpool and Glasgow, sometimes commence with trading on the credit of others, and in many instances finally augment the vast capital absorbed in the trade of those great emporiums of commerce.

In manufactures there is still less to boast of than in commerce; ship and boat-building, the manufacture of sail-cloth and cordage, have always prevailed here, and iron foundries exist in the locality; but of late, owing to the enterprise of some individuals, there have arisen a soap manufactory, a sugar refinery, a salt refinery, a manufactory of shoe-blackening, and another of glass, with an extensive distillery and several breweries.

In closing this sketch of the rise, progress, and present state of our port, though the town is not deficient in the production of men whose names are known in the paths of science, as Huxham, Dr. Mudge, General Mudge; and of literature, as Musgrave, Bidlake, Howard; and more especially in the art of painting, in which branch it may boast of Sir Joshua Reynolds, a native of this vicinity, who first exercised his profession in this town; of Northcote, Eastlake, Haydon, Prout, Ball, Johns, Rogers, and others: yet it is deficient in two requisites essentially necessary to the production of a state of society, such as our present population, wealth, and condition demand, namely, education and places

for religious worship. It is not meant to speak with the slightest disparagement of many of the useful classical, commercial, and other seminaries established in the towns, but merely to point out that it would be desirable, in its present condition, to have a school of superior pretensions established, such as have been instituted at Edinburgh, Manchester, Birmingham, and other populous places. There is also a great deficiency amongst the lower description of schools, where there is not only a want of proper, healthy, and commodious apartments, but where the instruction given is inadequate to the wants of the classes attending them, and where some of the masters are as incompetent to the discharge of the duties of their office, as others have been found in the Statistical Reports from Glasgow, Manchester, and Liverpool. There is also a lamentable want of accommodation for the poorer classes in the churches of the Establishment: after allowing for the part of the population who dissent from the tenets of the Church of England, for all those whom age or infancy renders incapable of attending public worship, and for the sick and infirm, still a vast number remain, who have no proper places provided for them to attend this important duty.

It appears, then, from the preceding statement, that Plymouth has occupied a far longer period than the sister towns in attaining to its present magnitude; for, as we find it existing in the reign of Edward III., with a population of 7,000 persons, it has taken five centuries before it amounted to its present number of 36,500. Stonehouse, though in existence as a very small fishing village in that reign, probably not containing more than a few families, has likewise only of late years so increased, from 3,667 in 1801 to 9,712 in the present year; while Devonport, which did not exist until 1690, has started, in a century and a-half, into importance as a parish containing nearly 34,000 persons. So that Plymouth, Devonport, Stonehouse, Stoke, and Morice Town, contain altogether a population of 80,061 persons; and, as such, constitute the tenth place in the kingdom of Great Britain, being exceeded only by London, Glasgow, Manchester, Liverpool, Edinburgh, Halifax, Birmingham, Leeds, Bristol, and Sheffield.

Having thus traced from their origin, the rise of these large towns, and pursued their progress to the attainment of their present increased condition in population, wealth, and prosperity, it is gratifying to be able to state, that there appear no symptoms of decay in any part of their political constitution. The government establishments are far more splendid in their external appearance than formerly, and, though greatly diminished in the amount of their expenditure, yet are efficient for the purposes for which they are now required; the commerce and manufactures of the towns are increasing; the communication by sea with all parts of the United Kingdom, and especially with Ireland, is greatly facilitated by means of steam; their public roads and bridges have continued annually to improve, and the communication with Cornwall is rendered, by the invention of a steam-bridge, as safe and as certain, as if a navigable river did not intervene between the two counties; and though, at the present moment, the communication with the metropolis, by the aid of a railroad, is impeded by difficulties arising from the nature of the country, intersected as it is by rivers, and abounding in hills and dales, from a deficiency of available capital, and a lack of that adventurous spirit which characterises other parts

of the empire; yet we may venture to hope that the presence of the British Association will stimulate the population to make every effort to maintain the towns in the elevated position they have acquired, and the Government to continue to foster and preserve a port, which cannot but be deemed intimately connected with the welfare and prosperity of the British Nation.

APPENDIX.

No. 1.—*Government Establishments.*

	Men Employed.	Convicts Em- ployed.	Horses and Vessels Employed.	Annual Expense.	
				Period of Peace, (present.)	Period of War.
				£.	£.
Her Majesty's Dock Yard	(*) 2,389	486	44 horses.	†120,000	200,000
Ordnance Establishment :—					
Gun Wharf	46	24	..	} 10,000	35,000
Keyham Point Magazine	23	..	..
Royal Powder Works, St. Buseaux.	13	..	..
Royal William Victualling Yard . .	148	..	..	10,504	21,000
Royal Naval Hospital . . . . .	..	..	..	8,765	30,000
The Breakwater	about 210	..	4 vessels.	15,000	80,000
Total	2,829	510	..	164,269	366,000

* The workmen are paid every Friday, in gold and silver, about £2,300.
† For wages only; exclusive of timber, iron, and stores, of every description, the cost of which must be very large; as by a rough calculation, a man-of-war is estimated to cost the country £1,000 a year: but this latter expenditure is of course not local, or at least, in a small degree only.

The preceding table gives only a very small part of the expenditure by Government at this Port, other claimants are as follows :—

Pensions to Officers, and their Widows, worn out Seamen and Marines; Sea Wages to Sailors, Marines, and their Families, of whom about 4,000 attend monthly	£120,000
To about 40,000 Wives, &c. of Sailors and Marines, in monthly payments	45,000
Seamen in Ships paid at this Port	215,000
Total.	<u>380,000</u>

N. B.—This expenditure is of course on a peace establishment; in the year 1814, when Great Britain had 900 ships in Commission, it amounted at this Port alone to £970,000 in one year.

No. 2.—*Table of Population.*

	1801	1811	1821	1831	1841
Plymouth, Parish of St. Andrew's	8,727	12,339	12,206	18,884	23,564
Plymouth, Parish of Charles	7,313	8,464	9,385	12,196	12,963
Total	16,040	20,803	21,591	31,080	36,527
Stoke Damerel, including Devonport	23,747	30,083	33,578	34,883	33,822
Stonehouse	3,407	5,174	6,043	9,571	9,712
Plymouth, Devonport, and Stonehouse	43,194	56,060	61,212	75,534	80,061

No. 3.—*Places of Public Worship.*

PLYMOUTH.

Church of England:—	No. of Sittings.
St. Andrew's Parish Church . . .	2,500
St. Andrew's Chapel . . .	1,000
Mariners' Church* . . .	500
St. Charles' Parish Church . . .	1,500
St. Charles' Chapel . . .	1,000
	<hr/> 6,500

Other Denominations:—

No. of
Congreg.

Ebenezer Chapel, Saltash-st. . .	1,024
Trinity Chapel, York-st. . .	850
Rehoboth Chapel, Buckwell-lane	700
Friends' Meeting House, Bil- bury-st.	650
Philadelphian Chap., Willow-st.	300
Bethesda Chapel, Ebrington-st.	300
Union Bethel Chapel, Castle-st.	400
Salem Chapel, Salem-st. . .	650
New Tabernacle, Norley-st. . .	900
Rehoboth Chapel, Park-st. . .	350
Batter-st. Chapel, Batter-st. . .	800
The Great Room, Ebrington-st.	1,000
Providence Chapel, Raleigh-st.	700
Baptist Chapel, How-st. . .	700
A Chapel, Octagon-st. . .	300
Eldad Chapel, Wyndham-pl. . .	1,500
Old Tabernacle, Briton-side . .	760
Bible Christians' Chapel, Pa- rade	220
Lower-st. Chapel, Lower-st. . .	400
Unitarian Chapel, Norley-st. . .	500
Synagogue, Catharine-st. . .	200
	<hr/> 13,144

STONEHOUSE.

Church of England:—	No. of Sittings.
St. George's Chapel . . .	1,000
St. Paul's Chapel . . .	950
	<hr/> 1,950

Other Denominations:—

No. of
Sittings.

Roman Catholic Chapel, St. Mary-st.	283
Ebenezer Chapel, (Baptists) . .	350
Corpus Christi Chapel (Calvin.)	250
Emma-pl. Chapel (Independ.)	500
Wesleyan Chapel, Edgcombe- st.	650
	<hr/> 2,033

DEVONPORT (Parish of Stoke-Damerel).

Church of England:—

St. John's Chapel	1,300
St. Aubyn's Chapel	1,000
Dock-yard Chapel	1,000
Stoke Damerel (Parish Chur.)	800
	<hr/> 4,100

Other Denominations:—

No. of
Sittings.

In the Borough.

Princess-st. Chapel, Princess- street	1,200
Baptist Chapel, Morice-sq. . .	1,000
Mount Zion Chapel, Ker-st. . .	997
Mount-st. Chapel, Mount-st. . .	800
Methodist Chapel, Morice-st. . .	932
Baptist Chapel, Pembroke- street	500
Methodist Chapel, Windmill- hill	640
Unitarian Chapel, Granby- street	270
Calvinist Chapel, South-st. . .	240
Wesleyan Methodist Associa- tion, Marlborough-st. . .	70
Brianite Chapel	170
Moravian Chapel, James-st. . .	228
Bethel Chapel, Mutton Cove . .	150
Southcotian Chapel	130
Bethel Chapel, Cornwall-st. . .	200

In Morice Town.

Methodist Chapel, Gloucester- street	950
Bethel Chapel	200
Salem Chapel, Navy-row . . .	800
Wesleyan Chapel, Gloucester- street	260

In Stoke Village.

Providence Chapel	218
Methodist Chapel	180
	<hr/> 10,135

Note.—There are Chapels of the Establishment in the Citadel, Plymouth, and the Naval Hospital, Stonehouse, for the military and navy; and Thomas Gill, Esq., M.P. has a chapel, licensed by the Bishop, for his workmen on the Hoe. There is also a licensed room of the Establishment at Cat-down, in the parish of Charles.

* Trinity Church, now building, will be a substitute for the Mariners' Church, and will contain 1,080 persons.

No. 4.—*Classical and Commercial Schools in the Three Towns, in the Year 1838.*

Locality.	Kind of Instruction.	Number of Boys at Schools.		Total.
		Day Scholars	Boarders.	
1. Plymouth, Parish } of St. Andrew . }	Classical and Mathematical	61	7	68
2. „ „	Ditto	about 50	20	70
3. „ „	Commercial	20	50	70
4. „ „	Ditto	70	..	70
5. „ „	Ditto	27	..	27
6. „ „	Ditto	60	..	60
7. „ „	Ditto	35	..	35
8. Parish of Charles	Classical and Commercial .	52	12	64
9. „ „	Commercial	52	..	52
10. „ „	Ditto	40	..	40
11. „ „	Ditto	20	..	20
12. „ „	Classical and Mathematical	5	7	12
13. „ „	Classical and Commercial .	30	..	30
14. „ „	Classical and Mathematical	24	3	27
15. „ „	Commercial	75	..	75
16. „ „	Ditto	40	..	40
17. „ „	Ditto	60	..	60
18. „ „	Ditto	50	..	50
19. „ „	Ditto	50	20	70
20. „ „	Commercial and Classical.	7	4	11
Total		828	123	951
1. Stonehouse . .	Classical and Mathematical	23	11	34
2. „ „	Commercial	100	..	100
3. „ „	Ditto	50	..	50
4. „ „	Ditto	90	..	90
5. „ „	Commercial and Classical.	19	5	24
6. „ „	Commercial	80	..	80
Total		362	16	378
1. Stoke Damerel .	Classical and Mathematical	88	20	108
2. „ „	Ditto	20	..	20
3. „ „	Commercial	90	..	90
4. „ „	Ditto	40	..	40
5. „ „	Ditto	50	..	50
6. „ „	Ditto	27	..	27
7. „ „	Ditto	42	..	42
8. „ „	Ditto	80	..	80
9. „ „	Commercial and Classical .	10	..	10
10. „ „	Ditto	26	..	26
Total		473	20	493
Total of the Three Towns		1,663	159	1,822

The above returns were made towards the close of the year 1838; since which time many changes have taken place, especially in Plymouth;

several of the schools having passed into other hands, and a Diocesan Commercial School having also been established, which seems likely to exercise a most beneficial influence on the educational interests of these towns.

No. 5.—*Charity and Sunday Schools in the three Towns, in the Year 1841.*

		Boys.	Girls.	Total.
<i>Charity Schools:—</i>				
Plymouth . . .	Orphan's Aid	8	..	8
	Hele's Red Boys	4	..	4
	Lanyon's Blue Boys	12	..	12
	Grey School	54	60	114
	Lady Rogers's School . . . . .	..	52	52
	Household of Faith . . . . .	..	54	54
	Coburg Street, Bell and Lancaster	276	100	376
	National School, Charles	147	..	147
	Presbyterian . . . . .	..	50	50
	Poor's Portion, Workhouse	35	18	53
	Orphan Asylum . . . . .	..	50	50
	Total	536	384	920
Stonehouse . . .	National	104	84	188
	Infant	76	37	113
	Roman Catholic	No returns.		
	Royal Marines			
	Total	180	121	301
Devonport and Stoke	Devonport Public (1809)	170	..	170
	Ditto (1799) . . . . .	..	80	80
	Free, for Sons of Sailors and Soldiers	136	..	136
	Central (Evening)	20	80	100
	Devonport Workhouse	45	35	80
	Stoke Schools	100	56	156
	Total	471	251	722
	Total of the Three Towns	1,187	756	1,943
<i>Sunday Schools:—</i>				
Plymouth . . .	St. Andrew's Church	208	238	446
	Ditto Chapel	41	44	85
	West Hoo Church	29	37	66
	Coburg-street Chapel	21	..	21
	Charles ditto	40	92	132
	Cat Down Church	16	..	16
	Unitarian	41	50	91
	Norley Chapel (Independent).	170	185	355
	Ebenezer ditto (Wesleyan)	173	134	307
	Rehoboth ditto (Independent).	110	160	270
	Batter-street ditto (Presbyterian)	70	40	110
	How-street ditto (Baptist)	110	111	221
	Bethel ditto	108	93	201
	Lower-street Wesleyan	51	49	100
	Salem (ditto Association)	142	160	302
	Carried forward	1,330	1,393	2,723

Charity and Sunday Schools—continued.

		Boys.	Girls.	Total.
<i>Sunday Schools:—</i> Plymouth . . .	Brought forward . .	1,330	1,393	2,723
	Cat Down (Wesleyan Associat.)	36	34	70
	Parade (Bible Christians)	34	35	69
	Mill Bay (Baptist)	8	11	19
	Park-street (ditto)	9	11	20
	Eldad . . . . .	..	30	30
	Total	1,417	1,514	2,931
Stonehouse . . .	St. George's Chapel . . .	78	138	216
	Ebenezer Chapel (Baptist)	33	36	69
	Gunner-place ditto (Independent)	29	31	60
	Corpus Christi (Calvinist)	78	45	123
	Wesleyan	159	125	284
	Total	377	375	752
Devonport and Stoke	Stoke Parish Church . . .	..	50	50
	St. John's Chapel	100	70	170
	St. Aubyn's ditto . . . .	..	15	15
	Prince's and Mount-st. Chapels (Independent)	..	..	320
	Bethel Schools . . . . .	..	..	300
	Baptist ditto . . . . .	..	..	420
	Moravian School . . . . .	..	..	80
	Rev. Mr. Sherman's Chapel (Independent)	..	..	250
	Wesleyan Schools (including Morice Town)	..	..	1,290
	Total . . . . .	..	..	2,895
	Total of the Three Towns .	..	..	6,578

ABSTRACT.

	Number of Scholars.			
	Commercial.	Charity.	Sunday.	Total.
Plymouth	951	920	2,931	4,802
Stonehouse	378	301	752	1,431
Devonport and Stoke	493	722	2,895	4,110
Total	1,822	1,943	6,578	10,343

Notes on the Agricultural Produce of Cornwall. By Sir C. LEMON, Bart., F.R.S., Vice President of the Statistical Society of London, &c.

[*Read before the Statistical Section of the British Association, 2nd August, 1841.*]

THE greater part of what follows was written more than a year ago; but I was suddenly stopped in my inquiry by a circumstance which I will now relate, and which left me with an entire failure of proof regarding the proposition which I had principally in view. This paper, therefore, was thrown aside; and it is only because I think that the few agricultural facts which I then collected, and have since added to, may be of use to those who hereafter wish to know something of the produce of the county of Cornwall at the present time, that I have determined again to put on paper the scanty gleanings which, under the circumstances, I have been able to collect.

Statistical collections are often of no value at the time when they are made, and the only fair way of determining their worth is to ask the question, "Had a similar account been written fifty years ago, would it have been of use to inquirers at the present day?" If the answer with respect to this paper is in the affirmative, I am content to confess that I am not able to carry out my argument to the whole extent which I intended. My original paper was undertaken with this view:—It occurred to me that as Cornwall is almost surrounded by the sea, a test of the progress of its agriculture might be obtained by a comparison of its population at different times, checked by the imports of grain and flour at each respective period. During the earlier periods, I knew that I must rely only on the accidental observations of those who wrote on the state of the county generally; but for later times, I expected to have the books of the Custom-house to refer to for certain evidence of the amount of our trade with foreign countries, and with those districts of England from which we have been in the habit of importing corn, and consequently of the extent to which the population of the county has been dependent on resources exterior to itself. It was no small disappointment to me to find, after I had advanced to that part of the inquiry, that the books of the Custom-house at Falmouth, the principal place of import, had been destroyed about fourteen years ago. It appears that orders were received from London for their destruction, after certain extracts had been made; and those extracts give no information on the points which I have in view. The subsequent time is too short to lead to any important conclusions; and, thus baffled, I can do no more than record what I know of the present time, and afford to those who follow me the means of making those comparisons which are out of my reach.

It is unnecessary to go very far back in search of records of Cornish agriculture, or to dwell very long on intermediate events, but a few passing notes, collected from the historians of the different times, may be acceptable. Down to the date of Frazer's "Agricultural Report of Cornwall," in 1794, these extracts seem to favour the opinion that at no time was the agriculture of the county very deficient or very redundant; but that it sustained, or nearly sustained, the population, and rarely left a surplus. Leland, in his *Journey* in the time of Henry the Eighth, says that Roseland "is metely fertyle in corne and grasse;" but, from his description of the rest of the county, the impression on his mind seems

to have been that Cornwall was "more fertyle in tynne than corne." Camden's opinion may at first seem to favour the idea of a redundant produce, but he is corrected by Carew, to whose opinion I should give greater weight, because he lived in the county which he described, and had opportunities of observing the changes produced by the seasons and the vicissitudes of trade. Camden says, that "grain is produced in Cornwall in such plenty, that it does not only supply their own necessary uses, but Spain also yearly with vast quantities of corn." Carew in some measure qualifies this statement, and says, hypothetically, that "*had not* the embargo with Spain foreclosed this trade, Cornwall *was likely, in a few years*, to reap no little wealth by the same. And yet, whoever looketh into the endeavour which the Cornish husbandman is driven to use about his tillage, shall find the travail painful, the time tedious, and the expenses very chargeable." Carew speaks also of the extensive cultivation of barley as a new thing, affording a valuable resource to the poor in dear seasons; "for they were principally relieved, and the labourers also fed by the bread made thereof." From this statement I infer that, in abundant seasons, there was a surplus for exportation, which Camden assumed to be regular; and in scarce seasons a deficiency, to be supplied by barley. In average years, the growth probably supplied the inhabitants, and no more. The direct agency of price in procuring this adaptation can hardly be described in better words than Carew's own:—"When the price of corn faileth, men generally give over surplus tillage, and break no more ground than will serve to supply their own turn; wherethrough it falleth out, that an ill-kerned year, or saved harvest, soon emptieth their old store, and leaveth them in necessity to seek new relief from other places." Dearth and high prices of course follow, and, as a necessary consequence, increased cultivation.

Camden speaks of the great fertility of particular spots in the county, and gives Roseland as an example. He derives the name of this district from Ros, signifying in British "a heath." The etymology is of no importance, except as affording him occasion for a remark on the industry of the inhabitants, which had rendered the barren land fruitful. Polwhele, on the other hand (upon what authority I know not), says that Roseland had, from the remotest times, been highly cultivated. Norden, whose journey was probably made in 1584 (though he wrote much later), describes the county in these words:—"Corne there is in competent abundance, of all kinds; yet is the soyle of the country for the most part but meane, especially in the middle parte, a greate parte whereof is mountainous, moorish, and craggy; which being yet husbanded, as the country lately hath taken course, by burning their ground, and by soyling it with sea-sande, it becometh very profitable, especially for rye. The soyle also is very thin. The cattell in this countrye are not greate, their feedinge being but meane." Ogilby, whose itinerary was written in the reign of Charles II., describes the district of Roseland as sandy; but it was his business to look at roads, not country. At that time the high-road from Exeter to the Land's End ran through Roseland, and over King-Harry passage, which was then called "the King's High Ferry;" probably the two last words have, in course of time, run into one. Blome's "*Britannia*," (temp. Charles II.) contains this remark, that Cornwall "is more inclined to

sterility than fertility; but the parts near the sea, by reason of the industrious husbandman manuring the ground with sand and oreweed taken from sea-shore, beareth good corn.”*

A little later there appeared in the “*Philosophical Transactions*,” a paper entitled ‘*Improvements in Cornwall with Sea-Sand*,’ by Dr. Samuel Coxe. This paper bears no date, but appears to have been written about the year 1691. The following passage exhibits the custom then in use of exhausting the land by repeated cropping:—“When this sand is brought home, it is spread on the ground intended for wheat; or usually in the first crop of four, whatever may be the grain. After four crops, ’tis our custom to leave our land to pasture for six or seven years before we till it again.” Dr. Coxe says, that “This sea-sand is mostly carried on horseback, but in some places is fetched by wheels.” He computes the whole expense of its land carriage at 32,000*l.* per year. About forty years later, Tonkin makes the following remarks on the agriculture of his time, showing that Cornish husbandry still presented the same features. After confirming Carew’s account of the process of heating, burning, scoding, and sanding of coarse and furzy ground, but objecting to his estimate of 20*s.* an acre for the cost, saying that it amounted generally to 40*s.*, he proceeds to describe the course of cropping, and the long rest given afterwards:—“The tiller generally takes six crops out of the land so prepared, viz., one of wheat, then two of oats, then one more of wheat, and two more of oats; or sometimes one of wheat, then one of oats, next one of wheat, and three of oats, according to the goodness of the land and the manure they put upon it; and then if it is kept up for inclosure, after four or five years it will be fit for tillage again. But if the land be but ordinary, and not worth the keeping up for inclosure, they let it run amain; and such will not answer the tilling anew under forty years or more.” There is here no mention of barley; but in another place he speaks of the immense crops of barley grown in Meneage. Polwhele also speaks of that district as having from very early times been noted for its produce of barley. Tonkin mentions butts and wains, all drawn by oxen; but he says there were no carts or waggons, as being unsuited to the hilly and narrow ways. He refers to the scarcities in his time, when “very often the inhabitants do soon cry out on the least pinch.”

Borlase, who wrote in 1756, says, that at that time the manure used came chiefly from the sea, and he regrets that marl was not more sought after. We have in Borlase the first mention which I have been able to find of the culture of turnips. His expression is:—“Of late the turnip husbandry has begun to obtain, and several gentlemen have experienced the benefit of this useful root, in feeding sheep and other cattle, and mellowing the land for corn. The potato is still a more useful root, now everywhere cultivated.” After quoting Camden’s observations, that Cornwall produced corn, “not only to supply the necessary uses of the inhabitants, but Spain also, with vast quantities of

* From the circumstances of so many of these writers having thought it worth while to remark on the use of sea-sand in Cornwall, and of there having been about this time a paper in the “*Philosophical Transactions*,” written expressly to explain the mode of use and benefit of this manure, it would appear that there was something peculiar to Cornwall in the custom, which was not known in other maritime counties.

corn," he proceeds:—"The inhabitants, since Camden's time, are more advanced in number than the tillage has increased in proportion; and though the low lands in Cornwall, especially along the Tamar and Alan, may yield more corn than the inhabitants of those parts, and the less fruitful hundreds of Stratton and Lesnewyth, can dispense with; yet the hundreds of Powder, Kerrier, and Penwith, and the western parts of Pydre, do not yield corn near sufficient to supply the inhabitants. Upon the whole, if those parts entirely addicted to husbandry will yield a sufficiency of grain to make up, in a moderate year, what is wanting in the parts less cultivated and more addicted to mining, this is full as much as can be asserted in this particular."* These accounts also agree in representing the gross produce of the county, in articles of food for man, as hardly equal to the wants of the inhabitants, but approaching near to an equality in ordinary seasons.

In 1794, Mr. Frazer was employed by the Board of Agriculture to make a survey of the county. His report contains the following sentences. I must, however, premise that Frazer's epoch is one of peculiar interest; for, it is the pivot on which turned the change which occurred when, from being a country generally exporting corn, England became one generally requiring an importation of corn to feed its inhabitants; 1792 being the last year when any considerable quantity of corn was exported. "The internal parts of the county have remained hitherto uncultivated, and present to the view immense tracks of uncultivated waste and undivided commons, entirely in a state of nature; and, excepting the mining districts, almost without inhabitants. Cultivation has proceeded but a short space from the sea. On the sea-shores and the valleys near the banks of the great rivers are the chief, and almost only, seats of cultivation. On the whole, Cornwall, populous as it is in the mining districts and along the sea-shore, yet, if agriculture was more attended to, there can be no doubt that it would supply subsistence to a much greater population than it possesses; and it is to be hoped that we shall soon hear no more of complaint of scarcity in a county where nature has done so much and man so little. It must be confessed, that either agriculture has decayed or the population has increased much beyond the advancement in the improvement of their lands. The management of the lands is uniform. Arable is sown with wheat, barley, or oats, as long as it will bear any; and then grass for eight or ten years, until the land is recovered and again capable of bearing corn. Very often it remains in furze or brambles for twenty-five or thirty years. Their chief dependence is on sea-sand. Carts are not used in Devon or Cornwall; every thing is carried on horses' backs: they cannot be induced to try any other mode of carriage. In some parts of the county turnips are introduced as a rotation crop, but the practice is not general. It is, in fact, only practised by gentlemen farmers and the superior class of yeomanry. They neither drill nor hoe them, so that frequently the couch grass entirely covers the plants. In Cornwall, as nearly as I can calculate, the proportions of waste and uncultivated land stand thus:—One-third of the county is under a regular course of husbandry; one-third furze crofts, which are only broken up once in twenty-five or thirty years; one-third wholly unenclosed mountain

* Carew says, that large quantities of garlic were cultivated in Stratton for exportation.

or waste land. I am persuaded that there is, at the lowest estimation, 600,000 acres of waste land, which may be valued at 7s. 6d. per acre, and produce an annual rent of 37,500*l.* a-year, and yet leave a sufficiency of turbary for burning."

In 1808, Mr. Worgan was employed to make a general survey of the agriculture of the country. He seems to have been much struck with the advance made since the visit of Frazer, in 1794, and says that no county exhibited greater improvement. Still he makes the same remark, "that the course of crops is extremely reprehensible." "There is no circumstance which evinces the truth of this assertion more than the wretched, exhausted, foul appearance of the ground laid down with grass seeds; nor can it be otherwise after having been cropped with corn as long as it will bear any." He computes the average crops of wheat at 18, 20, and 22 Winchester bushels per statute acre, and says that in strong lands as much as 30 or 40 bushels are sometimes obtained. Barley he puts at 30 to 60 bushels, and says that the crop sometimes reaches 90 bushels. Oats 40 to 60. Potatoes from 200 to 600 Winchester bushels per acre. Of this crop he says, "If Cornwall does not grow wheat enough for its inhabitants, it supplies other countries with large quantities of potatoes. This year (1808) some shiploads have been sent to London, and Portsmouth and Plymouth are furnished with many bushels annually from hence." Frazer also speaks of the great abundance of this produce, there being sometimes as much as 900 bushels obtained from a Cornish acre in the neighbourhood of Penzance, where two crops are ripened in one season. Polwhele quotes Hals to prove that potatoes were cultivated in Cornwall as early as the time of the Normans. I am quite at a loss to understand that passage. As a proof of the advance made in the mechanical means of husbandry, Mr. Worgan says that no county affords a greater variety of wheel and other carriages than Cornwall; such as the waggon, wain, one or two-horse cart, ox butt, gurry butt, slide, and sledge. From the foregoing accounts I deduce these two inferences,—that even as late as the year 1794, the practice of exhausting the land was general; and that, on the whole, the agriculture of the county did not more than feed its own inhabitants.

As to the number of those inhabitants, we have at first but little to guide us. Carew mentions a muster-roll, but does not give its amount. He dissents from the opinion of those who thought that the numbers had of late *diminished*; but does not speak confidently of an increase. Lysons refers to a poll-tax in the time of Edward the Third (1377), and thence calculates the whole population of the county of Cornwall, making allowance for those not assessed, at 34,960 persons. Accurate and industrious as he was, I dare not dispute his authority; but Chalmers, who seems to quote the record, gives the return for Cornwall at 51,411. As, however, Lysons wrote with an especial view to Cornwall, and Chalmers, in his estimate of the wealth of England, only incidentally refers to this county, I think it safest and best to abide by Lysons. The population of all England and Wales was then, according to the same poll-tax, 2,353,203 persons. I shall presently show that, in Carew's time, the whole population of England and Wales had about doubled. It is reasonable to conclude, therefore, that the population of Cornwall had doubled also, and comprised 69,900 persons.

The estimate for England in Carew's time is arrived at by the fol-

lowing means:—Harrison, quoted by Hume, has given the result of a muster-roll of fighting men, taken in 1575; and Sir Walter Raleigh asserts that there was a general review in 1583 of all the men capable of bearing arms. These two accounts agree in representing the fighting men to have been about 1,172,000, and therefore are worthy of some confidence. But, as they far exceed all other computations, one of which, according to Hume, made the whole population at that time only 900,000 souls, I think it probable that the enumeration was pushed to its utmost extent, and that many a stout boy under 20 years of age, who could draw a bow, was returned as a fighting man. Their number may be taken to balance the number of old men incapable of bearing arms; and as Mr. Rickman has shown that the age of 20 divides the male population into two equal parts, and as the females are always nearly equal to the males, I multiply the supposed fighting men by four for the whole population, which I take to have been 4,688,000, or nearly double that of 1377.

The number of the people of Cornwall in 1700 is stated by Marshall (I know not how computed) to have been 105,800; and as the great increase in our population which has since occurred, probably arose, and has proceeded, *pari passu*, with the developement of the copper mines, it seems not unreasonable to suppose that, previous to the existence of the copper mines on a great scale (that is, previous to the time of Tonkin), the rate of increase was slow and inconsiderable. I venture, therefore, to take the population of 1700, namely, 105,800 persons, as a fair approximation to that of 1691 and 1733; that is to say, the date of the article in the “Philosophical Transactions,” which I have quoted, and that of Tonkin’s notes. The population of England and Wales, according to Mr. Finlaison’s calculation, was, in 1760, 6,479,730. Assuming, therefore, that the population of Cornwall bore the same proportion to that of all England and Wales, as when the census was taken in 1801, 1811, 1821, and 1831 (that is, as 1 to $47\frac{1}{3}$), the population of Cornwall will have been, at the time mentioned, about 137,000. Borlase’s book preceded this date by only a few years, and the population may fairly be assumed to have been in Borlase’s time, about 135,000 persons.

By the census of 1801, the population of Cornwall appears to have been 188,269 persons; and the census of 1811 shows that, during the intermediate ten years, the population had increased at the rate of 15 per cent. Supposing that the increase in the seven years preceding 1801 was at the same rate, the population of the county in 1794 may be assumed to have been about 171,000 persons. We are now in a condition to frame a table of the population which probably *was* fed by the agriculture of the county from 1583 to 1794, and it will stand thus:—

	Population.	Increase per Cent. of Agricultural Produce.
1583 . .	69,900 . . . . .	..
1691 } . .	105,800	51
1733 }		
1756 . .	135,000	28
1794 . .	171,000	$26\frac{1}{2}$
The whole period		144

Such may be presumed to have been the progress of agriculture in Cornwall during 200 years; that is, up to the time of Frazer’s Report. I can carry this comparison no further, for we are now arrived within

the limits of official accuracy; and slight indications like the foregoing, which may be accepted as evidence of fact, however inconclusive with respect to remote times, are now of no value whatever to any one accustomed to rely on official documents, and the detailed returns of recent transactions, which we are in the habit of seeing made to both Houses of Parliament. Upon almost every other subject correct information may be obtained; but, for the reason I have stated, it is impossible to estimate the coasting trade in corn and flour beyond fourteen years ago. I am content, therefore, to pass on to the present time, and to inquire what information may be obtained as to the present state of the county, its products, and its population. In a few weeks we shall know accurately what are our present numbers, but I presume that we shall find it to be about 345,000. This increased and increasing population is dependent for subsistence on our agriculture and fisheries, aided, perhaps, by some small supply of corn by the coasting trade, if it should be found that the quantity of that article weighed against the export of potatoes, cattle, and other produce, turns the balance in that direction. It must be borne in mind, that since 1832 up to the middle of 1838, there had been no considerable importation of foreign corn into England generally: consequently the home trade by itself affords a true measure of the traffic in grain of Cornwall in particular. From official sources I have compiled the following Tables:—

TABLE A.—Coasting Trade of Cornwall in Corn and Flour.

		Quarters Imported.	Quarters Exported,
1836	Wheat	6,897	8,692
	Flour (105,228 cwts.) =	30,065 (1,612 cwts.)	460
	Barley	5,748	41,352
	Malt	3,159	7,861
	Oats	7,115	10,394
1837	Wheat	8,610	6,314
	Flour (149,099 cwts.) =	42,574 (6,088 cwts.)	1,739
	Barley	7,552	26,536
	Malt	2,544	4,388
	Oats	4,377	3,677
1838	Wheat	11,980	3,009
	Flour (128,060 cwts.) =	36,588 (3,088 cwts.)	882
	Barley	9,060	22,889
	Malt	2,916	5,482
	Oats	1,462	2,368

The trade with Ireland, not included in Table A., was as follows. There was no export from Cornwall to Ireland:—

TABLE B.—Corn and Flour Imported from Ireland.

		Quarters Imported.
1836	Wheat	1,027
	Flour (75,449 cwts.)	21,556
	Barley	84
	Oats	11,896
1837	Wheat	568
	Flour (50,360 cwts.)	14,388
	Barley	258
	Oats	21,750
1838	Wheat	2,500
	Flour (82,233 cwts.)	23,495
	Barley	883
	Oats	22,220

* The actual number, as obtained from an authentic source, is 341,317.—ED.

Some oatmeal and grits are imported annually from Ireland, but the quantity is inconsiderable.

TABLE C.

Showing the Total Imports and Exports of Grain and Flour from all places, Ireland included, and the Balance resulting:—

<i>Wheat and Wheat-Flour.</i>									
	Quarters Imported.		Quarters Exported.		Difference.				
1836	.	.	59,545	.	.	9,152	.	.	50,393
1837	.	.	66,140	.	.	8,153	.	.	57,987
1838	.	.	74,563	.	.	3,891	.	.	70,672
Excess of Imports									3)179,052
Average quarters imported									59,684
<i>Barley and Malt.</i>									
1836	.	.	8,991	.	.	49,213	.	.	40,222
1837	.	.	10,354	.	.	30,924	.	.	20,570
1838	.	.	12,859	.	.	28,371	.	.	15,512
Excess of Exports									3)76,304
Average quarters exported									25,435
<i>Oats.</i>									
1836	.	.	19,011	.	.	10,394	.	.	8,617
1837	.	.	26,127	.	.	3,677	.	.	22,450
1838	.	.	23,682	.	.	2,368	.	.	21,314
Excess of Imports									3)52,381
Average quarters imported									17,460

Reducing the two latter to the standard of wheat, that is, taking barley at half, and oats at one-third the value of wheat, we have the total deficiency of grain in quarters of wheat as follows:—

	Quarters.
Wheat and flour imported	59,684
Oats imported, reduced to wheat	5,820
	<hr/>
	65,504
Deduct barley exported, reduced to wheat . .	12,717
	<hr/>
	52,787
	<hr/>

Thus, it appears that there was an annual deficiency of grain in the county to the amount of 52,786 quarters of wheat; and supposing the consumption to be the same in Cornwall as elsewhere throughout England, namely, one quarter of wheat per annum to each person, there will have been the same number of persons to be fed by importation; that is to say, rather less than one-sixth of the population at that time. Now let us see how far the balance is restored by the export of agricultural produce of other kinds raised in the county, but not used by its inhabitants:—

First, of *Potatoes*.—Of these no official account can be obtained; but

from private sources I have received the following information, which I believe may be relied upon, for the year 1839. But as that year happened to be a year of less export than the preceding years, it is not fair to assume that it affords a full average. I am told, also, that in proportion as the means of transport have increased, and will probably continue to increase, the trade in potatoes may be considered as a growing trade, which is capable of immense developement. The increase of steam communication has already produced a great effect, subsequent to the transactions which I am about to relate:—

In 1839 there were exported from Falmouth, during the first six weeks	Cwts.
of the season, 600 baskets of potatoes per week, each weighing 1 cwt.	3,600
Probably, during the remainder of the season, as much as	3,600
From Hayle, during the whole season	850
From Penzance	3,040
From Looe and other parts of the county, probably	600
<hr/>	
Total of potatoes exported	11,690
<hr/>	

As a large portion of the above is the very early produce of Penzance and its neighbourhood, which comes into competition with the forced potatoes of the London market, the price at which it is sold is very high. Very early in the season the price of potatoes sent to London per steamer is about 2*l.* per Cornish bushel, or 1*l.* per basket. The export continues till the price falls to 10*s.* per basket, or perhaps to 7*s.* 6*d.*; but very little is sent when they fall to this latter price, so that 15*s.* may be considered the average price. Suppose that the whole quantity is sold at an average price throughout the year of 10*s.* per basket, the value will be 5,845*l.*, equal to 2,050 quarters of wheat at 57*s.* I am induced to think that the above is below the fact, because one company took credit in the months of May and June, 1836, for 742*l.* 10*s.* for the transport of Cornish vegetables (including 650 baskets of potatoes of 1 cwt. each), which were shipped for London by steamers, at a freight of 2*s.* per cwt. It is clear, also, that other vegetables are shipped at Falmouth for the London market; but I have no means of computing the amount.

Next, with respect to *Cattle*.—It is quite impossible to get an accurate account of the cattle which annually cross the border to and from Devonshire. The following information is derived from two very considerable Cornish dealers, and from two Devonshire persons engaged in the same traffic, who are in the habit of attending the fairs in the county. Though they differ in the gross amount, they agree in this—that nearly five times as many beasts are driven out of the county as come into it. One account calculates the number driven out of the county at 6,000, but says, that a great many of these are small steers, worth from 7*l.* to 10*l.* each. He estimates the weight of all the cattle exported, as averaging from 5 cwts. 2 quarters to 6 cwts. per head. Another says only, that two-thirds of all the oxen bred in the county are sent upwards to be fatted, besides some cows; and that, since the breed of cattle has been so much improved in Cornwall, the number imported from the north of Devon has greatly decreased. A third computes the number of lean beasts driven out of the county to be above 3,000, and that from 1,000 to 1,500 cattle for the butcher are annually sent to Plymouth and Devonport. He values the lean beasts

at 12*l.* per head, the fat cattle at 15*l.* per head. His information is derived from great experience, and from careful inspection of the lists of fairs, so that I rely with some confidence on his opinion. The fourth confirms his statement as to the number sent to Plymouth and Devonport, but says nothing of the lean cattle sent to other places. He computes the cattle sold to Cornish butchers at from 800 to 1,000. With respect to sheep and lambs, it appears that all which are reared in the county are fattened and consumed at home. On the whole, then, I am inclined to think that the following may be taken as a fair approximation to the amount and value of the traffic in cattle between this county and Devon:—

Exported.—Lean cattle, 3,500, at 10 <i>l.</i> per head . . .	£35,000
Cattle for the butcher, 1,200, at 15 <i>l.</i> per head . . .	18,000
	<hr/>
	53,000
Imported.—Cows for the butcher, 900 at 12 <i>l.</i> per head . .	10,800
	<hr/>
	£42,200
	<hr/>

This amount is to be carried to the credit of the agriculture of the county, and is equal in value to 14,807 quarters of wheat at 57*s.*

It is quite impossible to ascertain the quantity of the supplies afforded to the shipping not belonging to the county, at Falmouth, Penzance, and other ports. It is, therefore, by a mere guess that I take it at the value of 5,000 quarters of wheat. It is said, that by the packets alone, a sum of 100,000*l.* is annually expended at Falmouth, a great part of which must be for provisions consumed by those who do not belong altogether to the county. Vessels of all kinds are in the habit of taking in supplies at Falmouth, which are sometimes valuable, and would occupy a large portion of the 5,000 quarters which I take for the whole county. Then, as a set-off against the deficiency before stated, namely, 52,786 quarters of wheat, there will be—

For potatoes exported (quarters of wheat) . . .	2,050
For cattle ditto	14,807
For the shipping	5,000
	<hr/>
Total exports	21,857
	<hr/>

This amount should be deducted from 52,786 quarters of wheat, and there will remain a deficiency of 30,929 quarters. I conclude, then, that the agricultural produce of the county is insufficient for its own inhabitants, to the extent of 30,929 quarters of wheat.

Now the value of the above, at 57*s.* per quarter, is 88,147*l.*, and this sum must be annually paid out of the exports of the county to the parties supplying us with corn. These exports may be estimated as follows—they are almost entirely of minerals and fish:—

Copper ore, average of 1838 and 1839	£862,527
Ditto ditto, sold by private contract, say one-third . . .	71,965
Tin ditto, sold at ticketings	215,895
Lead ditto	13,680
Silver ditto	14,777
Iron ditto	16,108
Arsenic ditto (218 tons)	2,834
Granite (8,483 tons)	8,667

China clay (in 1838*)	20,784 tons	}	. . . . .	35,160
China stone,	7,344 tons			
Sulphur, Slate, &c.	. . . . .			28,385
Fish (pilchards)	. . . . .		
Total exports				<u>£1,269,998</u>

The quantities and value of pilchards exported in 1838 were (exclusive of shipping charges)—

	£
3,182 hogsheads, at 52s.	. . . . 8,273
4,398 ditto at 56s.	. . . . 12,314
	<u>20,587</u>

In 1839—

5,959 hogsheads, at 52s.	. . . . 15,493
6,897 ditto at 60s.	. . . . 20,691
	<u>36,184</u>
Average value	. . . . <u>£28,385</u>

Comparing these exports with the deficiency of agricultural produce, it would appear that one-fourteenth of our annual exports is spent to procure food for the population at home.

Of wool I can say nothing, and the only method by which I can get at any knowledge of the quantity of cattle and sheep slaughtered and consumed in the county, is from the tanyards. A gentleman, to whom I have great obligations, has taken considerable pains to collect a true account of the hides and skins tanned by the various tanners throughout the county in the year 1839. The result is—

Bullocks	. . . . .	15,950
Calves	. . . . .	11,550
Sheep	. . . . .	56,600

Computing the carcass of each bullock at 6 cwts., each calf at 1 cwt., and each sheep at 1½ cwt., the gross amount will be 135,500 cwts., equal to about 45 lbs. for each person of a population of 336,000 souls: this is exclusive of pig-meat. The skins of pigs not coming to the tan-yards, I have no means of computing their number, but the amount is certainly great. Before I quit this subject, I will quote a quaint passage from Carew, which shows the quality of the sheep in his day, and the nature of the wool.—“The sheepe generally had little bodies and coarse fleeces, so as their wool bore no better name than Cornish hair; and, for such, hath been transported without paying custom.”

Mr. Couling, who gave his evidence before the Emigration Committee in 1827, says that there were then in Cornwall—

	Acres.
Of cultivated land	. . . . . 550,000
Of improvable waste	. . . . . 190,000
Of unprofitable land	. . . . . 109,000

Of the improvable land, which was mere waste at that time, vast quantities have been brought under the plough; and not a year passes in which this cultivation is not extended. With a view of ascertaining the qualities of the raw material out of which these improvements have been wrought, and in the hope that such knowledge may be available

* Henwood, see Report of Royal Institution of Cornwall.

for future improvements, I have had specimens of the natural soil analysed, taken from wastes on the three principal geological formations,—the killas or slate, the granite, and the serpentine. Out of these the work has been done, and the success which has attended their conversion into fertile land must have proceeded either from the addition of something wanting in their composition, or the removal of something deleterious. I subjoin an analysis of each kind of soil by Mr. Phillips, of the Museum of Economic Geology:—

No. I.—*Killas, from Goonreath Downs, 8 inches deep.*

Silica	80.2
Alumina, with a trace of oxide of iron .	16.0
Vegetable matter	3.8
	<hr/>
	100.0

No. II.—*Under the above, 16 inches deep.*

Silica	77.5
Alumina, with a trace of sulphate of lime	13.4
Oxide of iron	4.8
Vegetable matter	4.3
	<hr/>
	100.0

No. III.—*Granite, from Gadlias, near Penryn.*

Silica	74.0
Alumina, with a trace of sulphate of lime	16.0
Oxide of iron	5.9
Vegetable matter	4.1
	<hr/>
	100.0

No. IV.—*Serpentine, from Goonhelly Downs, near Trevivian, St. Keverne.*

Silica	70.0
Alumina, with a trace of sulphate of lime	20.0
Oxide of iron	6.2
Vegetable matter	3.8
	<hr/>
	100.0

The first thing which strikes us here, is the great similarity in the ingredients and the proportions in all these specimens, and the total absence of some of the characteristic components of the rocks beneath. The felspar in granite contains about 17 per cent. of potash; but there is no potash in the soil above. The serpentine contains from 30 to 40 per cent. of magnesia; but there is no magnesia in the soil of Goonhelly Downs. Yet, these are indestructible substances; and if the soil had been formed by decomposition of the rocks beneath, a considerable quantity of each must have been present. Moreover, there would have been no alumina in that derived from serpentine, which contains none. These facts are so extraordinary, that I should doubt the accuracy of the analysis, were it not that Dr. Daubeny analysed the soil of Goonhelly Downs a-year ago, and arrived at the same result. Hence arises this very difficult geological problem, which I am quite unable to solve, and with which I will conclude this paper. These deposits are on high ground: in the case of Goonhelly Downs, extending over a very extensive and elevated plateau. Whence did they come? how formed? or how transported?

A Statistical Account of Loan Funds in Ireland, for the Year 1840.
By HENRY JOHN PORTER, Esq., F.S.S.

(Read before the Statistical Section of the British Association, 30th July, 1841.)

At the last meeting of the British Association I was permitted to read a paper on the Mont de Piété system of pawnbroking in Ireland, and from the interest which the subject appeared to excite, I have been induced to endeavour to procure a statistical account of the operations of Loan Funds in that country, together with the opinions of the directors as to the benefits conferred by such institutions, the difficulties with which they had to contend, and the evils, if any, which may have arisen from the working of the system in their respective districts. These opinions I have so classified under different heads, that the result may be seen in figures, in conformity with the practice of the Statistical Section of this Association.

I have now the honour of presenting the result of my inquiries, but to read over even the names of 215 loan funds would occupy so much time, that I should not be able to give the results, which I trust may be found not only interesting, but useful. I have, therefore, prepared an abstract of the whole of the information furnished upon each head of inquiry in the several counties, and these I have again arranged in the four provinces; but those members of the British Association, who have time or inclination, may examine more minutely into the particulars, which will be found in the detailed account opposite the name of each loan fund:—

(See page 210.)

Of the 215 loan funds which are named in the detailed account, *three* have reported that their operations have ceased; and although, through the kindness of the secretary of the Central Loan Fund Board, I am able to give some account of every loan fund, yet there are several of which I have not received full particulars, in reply to a circular which I addressed to the secretaries of all these institutions.

The first point to which I would direct attention is the source whence these funds are derived, which are being lent out each week throughout every county in Ireland, except Sligo and Kerry; in which two counties, however, there are loan societies in connexion with the London Charitable Association. And here it is necessary to allude to a system which was very general in Ireland, and which has only been partially checked by the working of these loan funds. The following extract from the report of the Ballycastle Loan Fund will explain it:—

“It was a common practice to supply meal at a price one-third above the market. Potatoes were also supplied during the cheap season, an engagement being entered into by the buyer to pay the summer price, whatever it might be; nor was this all, for interest was charged on the promissory notes at the rate of six per cent. Again, if a poor man required a cow or a horse, he applied to one of the money lenders, who either purchased it for him, charging him one pound for the bargain, and sometimes more; or counted down the money asked for, by way of tender, and then abstracted a pound for the compliment; in either case putting the borrower to the cost of 1*s.* 6*d.* for the promissory note, and requiring him to pay *six* per cent. interest. In like manner weavers were obliged either to take yarn from dealers considerably above the market price, or if, as was often done, they borrowed 20*s.* for one month,

Statistical Account of Loan Funds in Ireland for the year 1840.

Counties.	Number of Loan Funds established.				Operations of 163 Loan Funds, 52 having made no Returns.	
	Before 1838.	In 1838.	In 1839.	In 1840.	Capital in Circulation.	Rate of Interest per Cent.
					£.	£.
Antrim	1	1	3	2	14,118	5 and 6
Armagh	1	4	1	..	12,295	4, 5 and 6
Cavan	3	5	1	..	16,842	5 and 6
Donegal	4	2	..	1	9,750	5 and 6
Down	1	2	3	..	8,673	6
Fermanagh	1	1	3	1	7,886	5 and 6
Londonderry . . . . .	..	..	1	..	2,625	5
Monaghan	5	2	2	..	10,313	5 and 6
Tyrone	5	2	3	1	19,362	5 and 6
Total in Ulster .	21	19	17	5	101,864	
Carlow	3	1	3	1	11,029	5 and 6
Dublin	1	2	..	..	685	6
Kilkenny	6	1	..	2	580	5 and 6
King's County	2	1	..	1	3,767	5 and 6
Kildare . . . . .	..	..	..	1	4,598	6
Longford	1	2	3	..	7,371	6
Louth	1	..	1	1	1,224	5 and 6
Meath	2	1	3	..	5,951	5 and 6
Queen's County	2	..	..	..	6,824	6
Westmeath	2	..	3	1	11,994	5 and 6
Wexford	3	2	..	2	9,562	5 and 6
Wicklow	3	2	1	1	7,063	5 and 6
Total in Leinster .	26	12	14	10	70,648	
Clare . . . . .	..	..	..	1	360	6
Cork	5	2	1	5	17,191	4, 5 and 6
Kerry . . . . .	..	..	..	..	..	..
Limerick	1	..	..	1	11,000	6
Tipperary	3	1	4	..	8,916	6
Waterford . . . . .	..	3	3	..	6,794	5 and 6
Total in Munster .	9	6	8	7	44,261	
Galway . . . . .	..	..	1	..	458	6
Leitrim	5	..	..	..	3,629	6
Mayo . . . . .	..	..	..	..	..	..
Roscommon	2	1	..	..	3,048	5 and 6
Sligo . . . . .	..	..	..	..	..	..
Total in Connaught	7	1	1	..	7,135	
Provinces of {						
{ Ulster	21	19	17	5	101,864	..
{ Leinster	26	12	14	10	70,648	..
{ Munster	9	6	8	7	44,261	..
{ Connaught	7	1	1	..	7,135	..
Total	63	38	40	22	223,908	..

compiled by Henry John Porter, Esq., F.S.S.

The information within these Seven Columns embraces the operations of the whole
Number of Loan Funds—215.

Total Amount circulated in 1840.	Total Number of Loans in 1840.	Sums in the hands of Borrowers on 31st Dec., 1840.	Gross Profit, including Interest, Cards, Fines, in 1840.	Expenses of Management, not including Interest, in 1840.	Net Profit, after deducting Interest and Expenses of Management, in 1840.	Amount of Profits actually expended in charity in 1840.
£.	No.	£.	£.	£.	£.	£.
70,568	17,216	18,674	2,528	912	634	100
53,733	13,696	12,368	2,018	648	618	233
96,194	26,124	20,560	3,551	1,041	1,450	901
46,905	17,068	10,526	1,673	529	651	251
45,693	9,330	12,293	1,840	693	605	153
40,510	11,019	8,457	1,501	388	661	619
13,782	3,540	3,436	569	236	218	50
64,097	17,550	14,903	2,100	838	544	219
91,933	23,017	23,414	2,797	804	986	295
523,415	138,560	124,631	18,577	6,089	6,367	2,821
41,858	13,002	11,381	1,514	539	499	580
1,993	746	649	204	105	81	5
25,682	8,101	5,540	1,021	365	392	157
14,549	7,342	4,613	531	270	134	..
23,155	7,426	6,561	861	237	403	248
37,748	8,923	8,298	1,332	360	532	589
5,241	1,804	1,468	203	93	97	..
28,881	8,469	7,237	998	383	312	206
59,258	18,150	13,318	2,698	669	1,356	230
62,985	14,946	16,913	2,437	827	811	521
38,690	9,823	10,100	1,793	401	982	819
42,206	11,359	10,445	2,010	591	1,017	933
382,276	110,091	96,523	15,602	4,840	6,616	4,238
7,278	2,038	1,965	260	104	62	20
69,987	24,120	16,933	2,503	921	1,068	36
..
26,722	138,675	8,101	1,425	686	176	..
47,760	18,387	10,914	1,839	748	711	130
31,772	8,290	9,076	1,214	539	368	106
183,519	191,510	46,989	7,241	2,998	2,385	292
7,871	2,731	891	293	141	61	10
29,144	11,752	7,822	1,013	533	104	91
17,016	3,588	4,007	512	144	176	..
22,333	5,939	6,458	766	306	137	46
..
76,364	24,010	19,178	2,584	1,124	478	147
523,415	138,560	124,631	18,577	6,089	6,367	2,821
382,276	110,091	96,523	15,602	4,840	6,616	4,288
183,519	191,510	46,989	7,241	2,998	2,385	292
76,364	24,010	19,178	2,584	1,124	478	147
1,165,574	464,171	287,321	44,004	15,051	15,846	7,548

Statistical Account of Loan Funds in Ireland for the year 1840.

Counties.		Operations of 83 Loan Funds, 80 of those which Loans					
		Loans for Horses, Cows, and Pigs.		For Seeds, Manure, Implements, and other Agricultural purposes.		For Meal, Potatoes, and other Provisions.	
		No.	Amount.	No.	Amount.	No.	Amount.
			£.		£.		£.
Antrim		1,969	12,525	596	1,947	4,197	12,353
Armagh		4,450	18,333	518	1,959	1,725	6,325
Cavan		4,755	16,684	1,689	6,453	1,616	5,705
Donegal		96	355	534	959	1,382	3,533
Down		1,295	8,231	538	3,537	1,472	6,436
Fermanagh		2,121	15,638	684	1,964	1,353	3,780
Londonderry		731	3,278	..	..	326	1,002
Monaghan		4,931	18,979	907	3,428	918	2,860
Tyrone		2,006	8,292	146	752	1,053	3,119
Total in Ulster .		23,354	102,315	5,612	20,999	14,042	45,113
Carlow		1,609	6,865	556	1,605	1,528	2,234
Dublin		40	80	100	173	30	54
Kilkenny . . . . .		..	..	..	..	..	..
King's County		1,133	3,876	195	694	244	715
Kildare		476	1,256	178	471	713	1,884
Longford		1,434	7,304	338	1,230	897	3,783
Louth		236	752	61	183	120	230
Meath		731	3,351	705	2,348	1,408	3,996
Queen's County . . . . .		..	..	..	..	..	..
Westmeath		860	6,680	535	2,242	400	1,200
Wexford		2,134	7,306	430	1,850	837	2,494
Wicklow		4,413	17,074	648	2,115	1,786	4,911
Total in Leinster.		13,066	54,544	3,746	12,911	7,963	21,501
Clare		170	349	8	17	194	260
Cork		491	865	272	466	402	569
Kerry . . . . .		..	..	..	..	..	..
Limerick . . . . .		..	..	..	..	..	..
Tipperary		2,853	6,392	211	430	2,290	4,592
Waterford		781	3,445	125	380	65	119
Total in Munster		4,295	11,051	616	1,293	2,951	5,540
Galway . . . . .		..	..	..	..	..	..
Leitrim		725	2,675	680	1,447	312	986
Mayo . . . . .		..	..	..	..	..	..
Roscommon		400	..	50	..	200	..
Sligo . . . . .		..	..	..	..	..	..
Total in Connaught		1,125	2,675	730	1,447	512	986
Provinces of	Ulster	23,354	102,315	5,612	20,999	14,042	45,113
	Leinster	13,066	54,544	3,746	12,911	7,963	21,501
	Munster	4,295	11,051	616	1,293	2,951	5,540
	Connaught	1,125	2,675	730	1,447	512	986
Total . . .		41,840	170,585	10,704	36,650	25,468	73,140

Compiled by Henry John Porter, Esq., F.S.S.—Continued.

who forwarded returns to the queries having kept no record of the objects for
were granted.

For Wool, Flax, Yarn, and other Manufacturing purposes.		For Looms.		For Iron, Coal, Leather, Timber, and other Mecha- nical purposes.		For Rent.		For Debts.		For Dealing.	
No.	Amount.	No.	Amount	No.	Amount.	No.	Amount.	No.	Amount	No.	Amount.
	£.		£.		£.		£.		£.		£.
690	1,996	61	156	1,486	5,976	848	4,485	503	1,197	3,249	9,927
1,269	5,098	291	882	607	2,074	435	1,785	347	1,318	611	2,500
1,166	3,467	3	10	411	1,445	1,704	10,544	662	2,358	1,504	5,261
369	1,064	..	..	35	109	114	285	28	81	1,549	4,997
891	3,062	79	244	325	1,321	119	567	4	16	210	783
1,234	2,307	17	50	726	3,468	407	2,860	5	15	811	2,686
314	1,226	..	..	..	..	85	298	9	28	1,926	7,600
1,154	2,778	20	80	1,012	3,208	516	1,979	34	76	243	878
1,374	5,932	..	..	231	844	525	3,208	50	149	388	1,644
8,461	26,930	471	1,422	4,833	18,445	4,753	26,011	1,642	5,238	10,491	36,276
250	411	4	12	518	1,740	250	1,220	196	124	152	623
4	13	..	..	..	..	26	44	7	10	9	13
..
74	222	..	..	268	956	119	410	40	140	349	1,334
238	628	..	..	178	471	..	..	..	..	..	..
266	1,145	..	..	549	1,796	482	1,888	337	1,401	594	2,499
89	229	..	..	129	406	..	..	..	..	160	434
28	114	..	..	371	1,733	487	994	10	37	808	3,474
..
30	150	..	..	240	1,440	772	6,360	90	900	400	3,181
147	729	..	..	433	1,695	334	1,156	30	90	536	2,287
300	841	..	..	813	3,478	491	2,196	154	376	831	3,481
1,426	4,482	4	12	3,504	13,715	2,961	14,268	914	3,078	3,839	17,326
3	5	3	5	123	251	9	21	1	2	270	710
148	170	40	40	173	537	381	890	169	411	800	1,133
..
..
342	606	..	..	2,623	5,563	549	1,519	118	500	963	4,980
326	1,186	..	..	137	518	5	16	6	13	661	2,164
819	1,967	43	45	3,056	6,869	944	2,446	294	926	2,694	8,987
..
577	1,720	..	..	384	902	166	495	154	462	446	1,141
..
..	..	..	..	50	..	66	..	..	..	40	..
..
577	1,720	..	..	434	902	226	495	154	462	486	1,141
8,461	26,930	471	1,422	4,833	18,445	4,753	26,011	1,642	5,238	10,491	36,276
1,426	4,482	4	12	3,504	13,715	2,961	14,268	914	3,078	3,839	17,326
819	1,967	43	45	3,056	6,869	944	2,446	294	926	2,694	8,987
577	1,720	..	..	434	902	226	495	153	462	486	1,141
11,283	35,099	518	1,479	11,827	39,931	8,884	43,220	3,004	9,704	17,510	63,730

Statistical Account of Loan Funds in Ireland for the year 1840.

Counties.		Operations of 163 Loan Funds, 52 having made no Return to the Queries submitted to them.								
		Agricultural Depositors.		Number of Depositors employed in Manufactures.	Servants.		Number of Depositors of			
		No.	Amount.		No.	Amount	£5 and under.	£5 to £10.	£10 to £20.	£50 and upwards.
			£.			£.				
Antrim		35	2,870	23	59	659	44	51	48	92
Armagh		120	5,690	27	55	1,218	48	44	43	82
Cavan		55	4,775	1	7	300	1	7	10	69
Donegal		49	1,931	..	67	738	118	16	37	25
Down		33	1,174	12	14	278	21	16	18	66
Fermanagh		35	5,013	4	8	456	1	5	8	38
Londonderry		4	300	..	5	200	..	..	..	..
Monaghan		48	2,866	17	7	212	..	3	4	59
Tyrone		48	3,970	2	8	158	2	11	27	91
Total in Ulster		427	28,589	86	230	4,219	235	153	195	522
Carlow		81	3,284	1	40	1,040	44	22	32	87
Dublin		3	20	..	..	..	4	1	..	2
Kilkenny		8	340	..	2	15	1	1	3	4
King's County		15	688	2	6	105	10	29	17	22
Kildare		11	500	2	1	12	1	..	8	14
Longford		10	522	2	6	411	..	2	7	38
Louth		3	25	..	2	20	1	6	..	7
Meath		33	1,933	2	28	595	7	13	14	25
Queen's County . . . . .		..	..	1	3	100	..	..	..	9
Westmeath		48	2,825	9	13	185	6	10	12	26
Wexford		50	4,683	5	17	600	4	24	21	62
Wicklow		32	1,945	10	10	200	14	20	18	62
Total in Leinster		294	16,765	34	128	3,283	92	128	132	358
Clare . . . . .		..	..	..	..	..	..	..	18	..
Cork		36	1,570	..	12	351	13	29	33	46
Kerry . . . . .		..	..	..	..	..	..	..	..	..
Limerick . . . . .		..	..	..	..	..	25	38	9	..
Tipperary		44	1,796	12	16	80	63	17	26	29
Waterford		19	1,472	2	13	344	4	7	21	31
Total in Munster		99	4,838	14	41	775	105	91	107	106
Galway . . . . .		..	..	2	..	..	..	4	2	2
Leitrim		13	1,636	..	7	340	2	5	14	19
Mayo . . . . .		..	..	..	..	..	..	..	..	..
Roscommon		2	350	..	9	115	..	1	..	12
Sligo . . . . .		..	..	..	..	..	..	..	..	..
Total in Connaught		15	1,986	2	16	455	2	10	16	33
Provinces of {	Ulster	427	28,589	86	230	4,219	235	153	195	522
	Leinster	294	16,765	34	128	3,283	92	128	132	35
	Munster	99	4,838	14	41	775	105	91	107	106
	Connaught	15	1,986	2	16	455	2	10	16	33
Total		835	52,178	136	415	8,732	434	382	450	696

Compiled by Henry John Porter, Esq., F.S.S.—Continued.

Benefits.						Difficulties.				Evils.			
Benefits to small Farmers in crops and tillage.	Same by purchase of Stock.	Usury suppressed, and provisions purchased at cost price.	Habits of Industry, Punctuality, and Economy.	Benefits to tradesmen, mechanics, and labourers.	General advantages.	Opposition.	Want of Funds.	Improvident Borrowers.	Little or no difficulties.	Loss of time and money to Sureties.	Intemperance or fraud.	Pawning to pay instalments.	Little or no evils.
4	4	4	3	3	3	..	..	..	4	2	2	1	3
2	5	5	4	3	4	..	..	..	5	..	..	..	5
4	7	8	4	2	6	..	2	4	2	2	..	..	4
3	3	6	2	2	5	..	..	..	5	..	1	..	5
2	4	3	2	1	4	1	..	..	3	2	3	..	2
1	2	2	1	1	5	..	1	..	4	..	..	..	5
1	1	..	..	..	1	..	..	..	1	..	..	..	1
1	6	3	2	4	8	..	..	..	7	..	..	..	8
6	8	5	5	4	5	1	..	..	7	2	..	..	6
24	40	36	23	20	41	2	3	4	38	8	6	1	39
2	3	6	3	3	7	..	..	..	7	..	1	..	6
..	..	..	..	..	2	..	..	..	2	..	..	..	3
..	..	..	..	..	1	..	..	..	1	..	..	..	1
1	4	3	5	3	5	..	..	..	4	..	1	..	5
2	2	3	2	3	4	1	1	..	4	1	..	..	4
2	3	2	2	2	4	..	..	1	3	..	1	..	4
1	1	1	..	2	1	..	..	..	2	..	..	..	3
3	3	4	..	3	6	1	..	1	5	2	2	..	3
1	1	..	..	2	2	..	..	..	1	..	..	..	1
..	1	2	2	2	3	..	..	..	4	..	..	..	3
2	2	2	3	3	4	..	..	..	4	..	..	..	5
1	..	2	4	3	4	1	2	..	3	1	..	..	5
15	20	25	21	26	43	3	3	2	40	4	5	..	43
..	..	1	..	..	1	..	..	..	1	..	..	..	1
1	1	1	8	2	10	..	4	..	10	..	..	..	12
..
..	..	..	..	..	1	..	1	..	..	..	..	..	1
..	2	3	6	3	5	1	4	..	6	..	..	..	7
3	2	4	..	3	6	..	3	..	4	..	..	1	6
4	5	9	14	8	23	1	12	..	21	..	..	1	27
1	..	..	1	..	..	..	1	..	1	..	..	..	1
..	2	3	6	..	5	..	..	..	3	..	2	..	6
..
..	2	..	2	1	1	..	..	..	..	1	..	..	..
..
1	4	3	9	1	6	..	1	..	4	1	2	..	7
24	40	36	23	20	41	2	3	4	38	8	6	1	39
15	20	25	21	26	43	3	3	2	40	4	5	..	43
4	5	9	14	8	23	1	12	..	21	..	..	1	27
1	4	3	9	1	6	..	1	..	4	1	2	..	7
44	69	73	67	55	113	6	19	6	103	13	13	2	116

or between two market days to purchase yarn for themselves, they were charged 1s. at least, and frequently a higher rate for every such accommodation. As to clothing, it is well known that it was usual for dealers to import a considerable supply of made-up clothes from Scotland, which were generally sold at an exorbitant profit at three months' credit, at the expiration of which term those who could not pay were served with a process; and then to escape ruin entered into a promissory note for the amount, subject to a further payment of 20*d.* per pound for every month until the note should be paid.

"These customs of oppression of the poor were sufficient, had there been no other motive, to rouse benevolent individuals to exertion, in order to place within the reach of the sufferers that relief which the loan fund system is so admirably calculated to supply, and which, wherever it is properly conducted, it will supply."

I shall also read an extract from the Tyrrell's Pass Loan Fund report:—

"In the prosecution of this course it will be expedient to take a retrospective view. This view will present some of the evils which were to be encountered at the formation of the institution. The most prominent of these were the evils inflicted by provision-mongers, money-brokers, and rent-drivers. The provision-mongers sold upon time, and obtained securities upon stamped paper for the payment of the debt, six months after date, at the enormous profit of at least 50 per cent., together with an additional charge, if the amount of the note were not liquidated at the appointed time. Punctuality was but rarely observed; a process, and frequently a decree, ensued, to the ruin too generally of the borrower. This evil was extensively prevalent. The loan fund has extinguished the traffic; it is no longer carried on at this *enormous* profit. The money-brokers lent small sums upon similar or greater profits; their trade has also been annihilated. A rent-driver in the neighbourhood made from thirty to fifty pounds per annum; but his office is now nearly a sinecure employment. In all these instances the interposition of the loan fund has been remedial and effective."

We find that the sum of 52,178*l.* has been deposited by 835 agriculturists, which is a gratifying fact, as the money-lenders just now described are almost invariably comfortable farmers, holding from 20 to 50 acres of land; the greater part, therefore, of this large sum was formerly employed in usurious practices, whereas now the poorer classes can purchase for ready money, by means of the loans they receive; and the farmers are glad to receive five or six per cent. for their money, which saves them all risk and trouble attendant on lending it out, as formerly.

Two instances, however, I am aware of, in which such persons withdrew their money in the latter part of last year, for the purpose of forestalling oatmeal; but when summer arrived they could not realize their own outlay, and I believe, at the present moment, the oatmeal lies on their hands, and they will not only lose the interest of six per cent., which they received from the loan fund the former year, but they will lose part of their capital in consequence of the cheap price of provisions from the blessed prospect of a most abundant harvest.*

The sums deposited by persons occupied in manufactures is very trifling,

* Since the above was written, I have ascertained that one of those persons has lost 10*l.* of his capital beside interest.

the number of depositors being little more than one-seventh of that of the agricultural depositors.

415 servants have deposited 8,732*l*. Persons of this class are not numerous, except in those loan funds in which small sums are received at a less interest until they amount to 5*l*., when a debenture may be purchased and the interest increased to six per cent. It is most important that this class of depositors should be encouraged, and that in every loan fund a savings' fund should be opened for deposits from 1*s*. to 5*l*., bearing at least four, if not five per cent. interest.

Depositors of 50*l*. and upwards are the most numerous class of debenture holders ; these are most valuable in the commencement of an institution of this kind, but it is desirable that they should be gradually paid off to make way for depositors under 20*l*., under 10*l*., and under 5*l*., that the high interest of six per cent. may find its way into the pockets of the working classes, for whose benefit these institutions are specially intended.

The last nine queries which were submitted to the directors of loan funds, had reference to the number and amount of loans granted for particular purposes. Eighty loan funds have stated that no record was kept of the object for which loans were given, and consequently no information could be afforded under these heads ; therefore the number of loans and their amount under these heads will comprise only those institutions which did keep such a record. The greatest number of loans, it is believed, have been applied to the most useful purposes. Within the year 1840 there have been issued—

	Loans.	Amount.
For the purchase of Horses, Cows, Pigs, &c. .	41,840	£170,585
For other Agricultural purposes, such as the purchase of Seeds, Lime, Manure, Implements . }	10,704	36,650
Total . . .	<u>52,544</u>	<u>£207,235</u>

It requires but a slight acquaintance with the circumstances of the working classes in an agricultural country, such as Ireland, to be convinced that the circulation of so large a sum must be of vast importance ; I believe to calculate the good which it confers both on the landlord and tenant would be impossible. We have practical experience in Ireland that the peasantry are improved by an increased stimulus to industry, and that the land is enriched and fertilized by the additional quantity of manure which is available. The advanced price of cattle for the last three years (the period within which the greatest number of loan funds have been established) shews that in Ireland we can now afford to keep a large proportion of cows for milk and butter, which formerly could only find a demand for the English market.

For the purchase of provisions the number of loans has been 25,468, amounting to 73,140*l*. These borrowers have been rescued from the usurious lenders already alluded to.

The total amount of loans for purchasing looms and materials for manufacturing purposes has been small, as such loans are confined to those northern districts where linen is the staple manufacture of the country.

Mechanics have derived considerable benefit not only from being able to purchase for ready money the materials used in their respective trades, but from the formation of habits of punctuality, sobriety, and industry.

Loans for the payment of rent and debts are not generally encouraged ; nevertheless there are many instances recorded of the best effects being produced by loans for these objects.

For the purpose of dealing in various ways, the sum of 63,730*l.* has been issued in 17,510 loans. This class of borrowers is very numerous, and from the testimony of the directors or secretaries of various institutions, it may be confidently stated that many families have been maintained in comfort and independence, who but for the loan fund must, ere this, have sought a shelter in the workhouse.

44 Loan funds have borne their testimony to the benefits derived by small farmers in their crops and tillage.

69 By small farmers in the purchase of cattle.

73 By usury being suppressed and provisions purchased at cost prices.

67 By habits of industry, punctuality, and economy being greatly promoted.

55 By benefits to tradesmen, mechanics, and dealers.

113 By general advantages to the community.

The difficulties with which the directors have to contend are stated to have arisen in

6 Cases, from opposition.

19 „ from want of funds.

6 „ from improvident borrowers ; while in
103 it is stated that little or no difficulty has been experienced.

13 Allude to the evils arising from loss of time to the borrowers, and sometimes from loss of money to sureties.

13 Speak of intemperance and fraud.

2 „ of the necessity of pawning to pay instalments.

116 State that there was little or no evil apparent.

I am aware that considerable difficulties have arisen from the districts of neighbouring loan funds not being sufficiently defined, and that consequently borrowers at one loan fund have in some instances received loans at a second. On this point I purpose offering some suggestions to the Government, through the medium of the Central Loan Fund Board, and therefore it would be occupying the time of the Section unnecessarily to enter into the remedies which to my mind appear clear, not only for this but for almost every supposed evil which may have arisen—evils which are attributable not to the want of anxiety and care on the part of the directors of these institutions, but to the want of experience in establishing them in the outset on the best and most judicious principles.

I will here insert several extracts from the letters which I have lately received from various loan funds :—

1. “ A considerable improvement is manifest in the habits and circumstances of the poor and industrious classes of the population. A diminishing of poverty and idleness, of vice, dishonesty, and dissipation. A friendly feeling promoted among the borrowers and securities, and their connections ; and peace and good conduct generally evinced within the sphere of the society’s operations.”

2. “ Many borrowers give satisfactory accounts of the advantages of a loan, saving them, as it does, from an extravagant charge for provisions got on credit, and enabling them to bring to market their own stock and crop at the most advantageous seasons of the year. Many poor people

have been enabled to crop their land who could not have purchased seed, and must have procured it otherwise at a great sacrifice. The *moral effects* of our institution are many; while it has afforded us a means of improving the worldly circumstances of the people, it has given an additional opportunity of teaching them the value of morality. While drunkenness, idleness, and general profligacy have been rebuked and discountenanced, honesty of character has been rewarded, and habits of industry and punctuality promoted and encouraged."

3. "The trustees have also to report they have, by the employment of efficient clerks and the adoption of an expeditious system, been able to remedy a defect generally complained of, loss of time to the public; they now receive the instalments from upwards of one thousand borrowers on Saturdays, during the ordinary office hours from nine to three o'clock, without delay to any individual.

"The trustees feel pleasure in reporting that the small savings' deposit branch of their establishment is gradually gaining the confidence of the industrious classes, for whose benefit it is intended; and many depositors of small sums weekly have, by the accumulation of such deposits, become five pound debenture holders of the loan fund."

4. "Generally speaking, tradesmen of every description, labourers and small landholders and dealers, borrow from us, and seem to be very sensible of the advantages afforded them. In many instances persons have been able greatly to better their condition in life by means of it, and it has greatly contributed towards establishing a principle of good faith between the borrowers and securities, and towards promoting a good feeling between the higher and lower orders."

5. "It would be difficult to say what portion of our borrowers have received most advantages from our society. The longer we are working, and the more we observe of the operations of the loan fund, the more satisfied are we of the immense importance of such an institution. We witness daily most cheering results in the improvement of many of the borrowers, who from a state of pauperism are now able to earn an honest livelihood. The moral benefits are very great in raising the character, giving habits of punctuality, and creating a good feeling between the lower classes and the gentry."

6. "The committee have observed the influence of this society upon the populace of this neighbourhood, and they feel impressed with the opinion that, when the character of the borrowers and securities are scrutinized, and the purposes for which the loans are obtained looked into, the objects of the institution are invariably achieved, and the advantages are great as tending to benefit the condition of the people, and in no small degree to unite all classes of society."

7. "One of the borrowers, a shoemaker, told me that his loans amounted to upwards of 40*l.* within the last two years, and that his profits had equalled the amount borrowed."

8. "The loan fund enables the working classes and small dealers to take advantage of the favourable time to purchase their provisions and stock of goods with ready money, instead of being liable to the extortions often practised on those whose want of means obliges them to purchase on credit at exorbitant prices; and the benefit it confers on farmers, tradesmen, &c., by supplying them with capital and assisting them in pressing emergencies, is equally great. It creates and encourages habits of industry

and regularity by means of the obligation to provide for and attend to the weekly repayments ; at the same time that it extends to borrowers opportunities of advancing themselves through their own exertions. Loan funds give a stimulus to activity and perseverance, the surest preventions of poverty and pauperism, and the most efficient agents of prosperity and independence."

9. "Out of the net profits a commodious house has been erected, consisting of an extensive and suitable office for the institution, and a coffee room, in furtherance of the rules of the society, together with promoting the views of the Temperance Society.

"There has also been a large sum expended in the purchase of looms, and procuring a competent master to instruct females to weave, thereby introducing a system of industry heretofore unknown in this county.

"The sum of 200*l.* has been appropriated to the erection and establishment of a fever hospital in the vicinity, an institution much called for in preventing the spread of that direful contagion, so prevalent among the poor."

10. "The committee have the satisfaction of stating that the labouring classes of the mining and other districts have been enabled, by means of loans, to meet the greatly increased demand for conveyances for sulphur pyrites from the mines to the shipping ports, and to open up for themselves a source of profitable industry. It is computed that upwards of 70,000 car-loads of ore have been drawn to this port in the past year, or more than 220 loads daily. On one occasion 337 cars, laden with ore, were brought into the town. This new source of income occasioned numerous applications for loans to pay for horses, materials for cars, and for hay."

11. "In reporting the working of this society during the past year, it is truly gratifying to be able to state that the most marked success has attended its operations ; and though the summer was one of the most trying description to the poor, owing to extreme scarcity and dearness of provisions, yet the weekly instalments were paid (with one or two exceptions) with the greatest punctuality ; and while there was not a single instance of any loss from bad debts, many poor and industrious families were enabled by the seasonable relief afforded them to continue in their homes, which otherwise poverty would have forced them to abandon, and beg for that precarious subsistence which, from want of constant employment, they could not procure for themselves.

"The abstract of accounts is so satisfactory, that it must remove from the minds even of the most sceptical all doubt as to the pecuniary advantages the institution affords to the poor, and the importance they attach to them ; but a just estimate cannot be formed of the real value of such a society unless we bear in mind that it is admirably adapted not only to relieve the temporal wants of the poor, but that it also exercises an extensive and moral influence, and is calculated not only to advance individual welfare, but also to promote general morality, by making a distinction between the deserving and undeserving, by holding out to the honest and industrious the means of advancing themselves, and by generating habits of rectitude and punctuality.

"Many benefits have arisen from the establishment of a loan fund in this neighbourhood ; to the poor especially, in the laying in a stock of provisions at the proper season and during the time when they are cheap,

whereas, before its establishment, they were compelled to buy on credit at an enormously advanced price. Also many cases came to my knowledge where poor families borrowed the price of a cow, and repaid the instalments with the produce of the milk and butter during the winter and the spring; in many other cases also the poor have been highly benefited by the loan fund."

12. "Any evils which have arisen to borrowers in a loan fund cannot be attributed to the system, but to the want of prudent, economical, and industrious habits in themselves, which we in general endeavour to counteract by making the loan a compliment to persons who possess these qualities, and rejecting the applications of others, till some appearance of amendment occurs, when they are generally accommodated.

13. "The only probability of loss would be if, from any circumstance, the society should be obliged to wind up its accounts suddenly and discontinue its operations. To meet this contingency it has been resolved to put a sum yearly into a safety or reserved fund. Thus the society having a part of its capital without interest, will be able, in a short time, to allocate more to charitable purposes, and in the mean time will have taken measures for its own safety.

"The poor man often pays from nine to fifteen pence a-month for the loan of a single pound, and frequently is obliged to purchase, at twice its value, an article which he does not require, that he may obtain money by disposing of it again for what it may bring him in the regular market. It is our desire to rescue the poor from such oppression, and we have, we trust, been in some measure successful. In conclusion, we trust that, by refusing the applications of such as are known to be drunken or immoral, this society has in some measure assisted to advance the cause of sobriety, industry, and order, while the mutual accommodation of persons becoming sureties for each other, without regard to *religious denominations*, and the frequent bringing of repayments to the office for each other, has contributed not a little to allay the spirit of sectarian bitterness and party prejudice."

14. "Many persons have been most materially and thankfully benefited. Several poor persons have said, 'Well, were it not for the loan, they could not have kept the house last summer;' and some that are now begging, say, 'could they have gotten security, they would still be keeping their houses;' but several bailsmen having suffered from the dishonesty of those they bailed, the poorer people who have no land or effects experience a difficulty in getting security. Several farmers and small dealers are now in much better circumstances than before they received their loans."

15. "Amongst the most palpable advantages, I may enumerate that the usurer's occupation is gone,—an occupation which seldom benefited the lender; for the enormity of the exaction seemed to justify every opposition to repayment, and when the debt has gone through the exhausting process of the Quarter Sessions' Court, whilst it ruined the borrower, it left the lender with often less advantage than if he had only required the legitimate interest for his money."

16. "Several who have hitherto been in great poverty are now enabled to keep a cow for milk and butter for their family; first having borrowed small sums, and by gradually increasing the amount of loans, have been able ultimately to hold the cow free, by paying up the instalments with

the produce of the milk and butter. Others have pigs and various other animals, viz., horses and asses, for which they can readily get employment in roads and other public works, which, of course, is more than sufficient to pay up the instalments, leaving the borrowers possessed of a beast, which otherwise he probably could not have obtained."

17. "The labour of the people has been made more productive by supplying them through the loan fund with the means of purchasing the requisite implements, &c., for carrying on their agricultural operations. Several farmers have been enabled to keep cattle, put in crops, and manure land, who would not otherwise have had capital sufficient for the purpose. Many persons have cleared large profits by dealing with capital furnished by the society, purchasing sheep, pigs, poultry, and eggs, and selling them again. Many debts have been liquidated in a manner both satisfying to debtor and creditor, payment by instalment being found in practice much easier than payment in one large sum."

18. "It would be almost impossible, without entering into a lengthened detail, to give a statement of the benefits conferred by a society so extensive in its operations as this; it is gratifying, however, to state that they exceed the most anxious expectations of all connected with it. The class most generally benefited by it are *small farmers*, who are enabled to purchase seed for their ground, stock for their farms, and in many instances to pay their rent, without being obliged to dispose of their produce at unseasonable markets. Labourers and mechanics are enabled to lay in their provisions at the market price, instead of purchasing them, as formerly, at six months' credit, or buying from retailers at an exorbitant price. Many who had never before had the benefit of a cow, have declared that since this society was established they were enabled to purchase one, and to pay their weekly instalments by the sale of the milk and butter, or the earnings of their children in the loom, and at the end of the 20 weeks had the cow completely clear. Dealers of various descriptions have been enabled to carry on their business with more profit to themselves and advantage to their customers, and had means to lay in, from time to time, a supply of such materials as their several callings require, such as leather, timber, iron, &c. In short, industry in general has been promoted, idleness and vice discountenanced, and many families actually saved from ruin; and it affords unmixed pleasure to the society to be able to distribute 30 pairs of blankets to the poor during the inclemency of the winter."

19. "The poor are delivered from those dealers who made an extra profit of their necessities. Meal dealers, and such like, on credit, are much suppressed, and their funds lodged with us."

I cannot conclude without noticing the Agricultural Loan Funds. In particular, those at Tyrrell's Pass and Moate are the most extensive, and I trust their judicious management and beneficial effects, when more generally known, may lead other loan funds to follow their example.

The first of these extends its operations over 400 square miles; it has employed a Scottish agriculturist, and furnishes seeds to farmers; it also supports from its profits an infant school, in which 120 children are being educated, and of whom 80 are in constant attendance. A platting school for Irish Leghorn hats and bonnets has been commenced, and the manufacture of those articles from grass and rye-straw are of acknowledged beauty. A Ladies' Society is connected with the loan

fund, which distributed at Christmas last to the value of 302*l.* of clothing; 177 stones weight of wool was lent on three months' credit, and above 40*l.* given in premiums. The report of the agriculturist is of the most satisfactory nature. A meal store was opened at the most trying period of the year, and employment afforded to 5,229 persons, who, with their families, constituted an aggregate of 19,795 souls, all deriving benefit from the employment afforded to one or more members of their families.

The Moate Loan Fund is also turning its attention to agriculture. The sum of 50*l.* per annum has been allocated to an agricultural school, on condition that day scholars recommended by the committee shall be gratuitously educated.

The school, which will open on 6th August, is the only one in Leinster, and, if properly supported by the landed proprietors, will doubtless prove a great benefit to the agricultural population.

Eighty pounds have been granted to the Moate Agricultural Society, to be given in premiums solely for the benefit of the farmers in those parishes from which the loan fund derives its profits, and who are almost, to a man, borrowers at the loan office. Forty pounds were also given to the Ladies' Charitable Association, which keeps forty poor women and girls in constant employment.

The object of this institution is to render the scholars practical and well-educated farmers, as well as to qualify them for situations as land-stewards, gardeners, and herdsman. With this view they will be taught the whole theory and practice of agriculture, including the proper management and rotation of corn and green crops, the nature of the soil most suitable for each, and the most approved modes of cultivation.

Their instruction, of course, will not be confined to the school-room, but they will be thoroughly instructed in the use of the plough and every agricultural improvement in general use.

They will be taught the best methods of draining, reclaiming, and improving land, and in making fences,—the properties of manures, management of stock, house-feeding, stall-feeding, &c. Lectures will be delivered annually on the diseases of stock, and also on agricultural chemistry. Gardening, including the management of fruit-trees, saving of seeds both for farm and garden use, will form a part of their studies; and, in addition to the common instruction in schools, they will be made acquainted with the use of the chain and level. Annual examinations will be held, and premiums awarded to those who shall distinguish themselves at the ploughing-match on the farms, or in the other branches of agricultural science.

On that branch of the Loan Fund system which embraces pawn-broking I am not prepared, at present, to give detailed accounts, as I occupied so much of the time of the Section on this subject at Glasgow.

They are, however, increasing in number, and, under proper management, I trust will be of immense benefit in mitigating the evil of pawn-broking. At Limerick, Tandragee, Portadown, Belfast, Newcastle, and Dungannon, *Monts de Piété* are in active operation, and Coleraine and several other towns are in correspondence on the subject, with the view to open such institutions also.

One feature of the Loan Fund system in Ireland should not be overlooked:—The Acts of Parliament which regulate their management

provide that the directors, or secretaries, shall derive no emolument whatever from the profits of the institution. The profits may be devoted to charitable purposes of a local nature, or may form a capital which ensures the debenture holders, and other depositors, from the possibility of loss.

It may be observed from the abstract I have read, that the sum of 7,548*l.* has been actually expended in charities, being nearly one-half of the net profits, and the other half is placed in the reserved fund of each loan fund for its own permanent benefit and security.

Another interesting feature is, that these societies are self-supporting; they require no donations or subscriptions for their establishment, though in many instances benevolent persons have presented various sums for their benefit. One kind of contribution is, indeed, called for, which in its value is incalculable,—the time and laborious exertions of the local clergy and gentry, many of whom work most indefatigably one day in each week, for the purpose of issuing loans and receiving instalments.

The labour of compiling the information contained in the tables I have had the honour to present to the British Association, has not been greater than that imposed upon the secretaries and other directors of those societies, to whom I addressed a circular, with no less than 20 queries, most of them involving much trouble and time in making the replies, which, generally speaking, were full and explicit; and I hope I shall be permitted here to express the obligation I am under to those gentlemen, for the readiness with which they have seconded my feeble efforts to render this paper worthy of being received by the Statistical Section of the British Association. The time and labour bestowed upon the subject has been more than fully compensated by the interesting accounts received, and the testimony borne to the value of the Loan Fund system,—a system which, when properly directed and judiciously managed, will be found to be a powerful engine for improving the condition, and elevating the tone of moral feeling amongst the working classes of my native country, who have been well described as “*THE FINEST PEASANTRY IN THE WORLD.*”

Letter addressed to the Statistical Section of the British Association, by the President of the Central Statistical Commission of Belgium.

[*Read before the Section, 30th July, 1841.*]

GENTLEMEN,

Brussels, 21 July, 1841.

By two decrees of the 16th of March, 1841, his Majesty the King of Belgium established in the office of the Minister of the Interior a central statistical commission, entrusted with the task of preparing an efficient plan for the publication of official documents, and of giving to those works that stamp of unity and completeness, which is indispensable in order to render them really useful to the Government and the cause of science.

Animated with the desire of rendering its labours as comprehensive as possible, the commission, which was appointed on the 12th of last June, is fully alive to the advantage of establishing a correspondence with the principal learned societies, and the distinguished men belonging

to their own and foreign countries, who have made statistics the object of their studies, or who are occupied with those moral and political sciences with which statistics are so intimately connected.

In pursuance of this object, the central commission would make an appeal to your enlightened views, and to the interest which you feel for everything that can contribute to the progress of this science, and have accordingly the honour of sending you a copy of the decrees by which it is constituted. It will feel grateful for any scientific communication with which you may favour it, and will be most ready to offer in exchange the official documents which may henceforward be published in Belgium, and which may be of interest to you. The commission requests me to assure you, gentlemen, of its high respect and esteem.

(Signed)

QUETELET, *President.*

X. HEUSCHLING, *Secretary.*

Report from the Minister of the Interior to the King of the Belgians.

SIRE,

In establishing a central office for Statistics in the office of the Minister of the Interior, the provisional government had for its object to enable the executive to collect and classify, in a methodical order, exact and complete documents on all the points which belong to this important branch of the science of government.

But by degrees this object was lost sight of. Some departments completely neglected statistics, others worked at them separately; sometimes diving into the same sources, and meeting and crossing each other in their researches. This want of unity necessarily led to discrepancies, needless repetitions, and omissions. The partial publications made by the different departments exhibit real merit. The returns, so interesting in a moral point of view, of criminal justice and of territorial statistics, the tables of commerce, the general documents, of which five volumes have already appeared, are works of high merit, which furnish, at each successive period, proofs of continual progress in the departments of government.

But there are still wanting in our system of statistics, in order that the government and science may reap all the fruits from it which they have a right to expect after so many efforts, a unity of purpose, a precise object, and carefully considered plans of investigation.

The measure which I am about to propose to your Majesty will have the effect of securing in future these qualities, which are essential to statistics.

A central commission of statistics should be created. Each department should be represented by one or more deputies, whom the Minister should choose among the officers in each, who have particularly applied themselves to the study of those branches of statistics which relate to their several departments. There should be appointed to preside at the meeting of these deputies a man of science, experienced in social economy, and accustomed to the arrangement of statistical details.

The nature of the task entrusted to the central commission may be easily inferred from what I before stated respecting the defects of the present system. The great object of its labours will be to bring together in one common depository all the scattered information which is at present collected by the different departments of government.

It will thus point out the omissions and superfluous details of existing publications. It will propose models for the statements and tables employed in collecting and classifying the elements of these publications. It will take care that all repetitions are avoided in the demands for information, and in the publications themselves. It will keep up a direct correspondence with the Minister of the Interior ; it will submit to him its observations and propositions, with the necessary instructions for each department. The Minister of the Interior will communicate the opinions of the commission to his colleagues, who will be at liberty to adopt or modify them.

Each department will continue to publish its own statistics, but, a uniform plan having been previously adopted, unity and completeness will be substituted for the want of uniformity which prevails in the existing publications.

It is with the unanimous consent of my colleagues that I submit this proposal for your Majesty's approval.

If, as may be hoped, the commission carries out satisfactorily the object we propose in its establishment, the government, the legislative chambers, and the country, will find in the official statistical publications, authentic documents calculated to throw light on all matters of discussion, to encourage useful works, and to make known annually the situation, the strength, and the material and moral resources of the kingdom.

(Signed)

LIEDTS, *Minister of the Interior.*

Copy of the Royal Decree, establishing the Commission.

LEOPOLD, King of the Belgians,

To all present and to come greeting.

Whereas by a decree of the Provisional Government of Belgium, dated the 24th January, 1831, the Minister of the Interior was directed to make a compilation of the general statistics of the kingdom,

We, being desirous of regulating and extending the statistical publications of the different ministerial departments, and acting upon the report of the other heads of departments, have decreed and do decree :—

Art. 1. That a central statistical commission shall be instituted in the office of the Minister of the Interior, the members of which, chosen as much as possible from amongst the officers of the different departments of the Government, shall be named by us.

Art. 2. One third of the commission shall be renewed at the expiration of every two years, commencing on the 1st January, 1843. The members will go out according to seniority, or in the case of an equality of service, the election will be determined by ballot. The members thus going out may be immediately re-elected.

Art. 3. The commission will propose a complete plan for the statistical documents relating to the different branches of Government.

Art. 4. It will take into consideration all the communications submitted to it by our Minister of the Interior ; and will correspond directly with that minister.

Art. 5. The mode of executing its functions, and the order of its labours, will be determined by a special regulation of the Minister of the In-

terior, in communication with the heads of the other departments, which shall have previously been submitted for our approbation.

Art. 6. A sum of money will be granted for the remuneration of the Commissioners, and the expenses of the office establishment.

Art. 7. Our Minister of the Interior is charged with the execution of the present decree.

Given at Brussels, 1841.

(Signed) LEOPOLD.

The Minister of the Interior. LIEDTS.

Royal Decree, naming the Members of the Commission.

LEOPOLD, King of the Belgians,

To all present and to come, greeting.

Whereas by our decree, dated this day, we have established a Central Commission of Statistics, in the department of the Minister of the Interior. According to the Report of our Minister of the Interior, and the advice of the other chiefs of departments,

We have decreed and do decree—

Art. 1. The following are members of the Central Commission of Statistics :—

Mr. Laurent Veydt, Director of Consulates and of Commercial Affairs.

Mr. Auguste Visschers, Director of the Mining Department in the office of Public Works.

Mr. Malou, Director of the Branch of Legislature and Statistics, in the office of the Minister of Justice.

Mr. Edouard Ducpetiaux, Inspector General of Prisons and of Charitable Institutions.

Mr. Dieudonné Sauveur, Commissary Inspector of the Civil Board of Health, Member of the Royal Academy of Brussels.

Mr. Edouard Smits, late Director of the Board of General Statistics, in the office of the Minister of the Interior.

Mr. Victor Misson, Chief of the department of Commercial and Manufacturing Statistics, in the office of the Minister of the Interior.

Mr. Quetelet, Director of the Observatory, and Perpetual Secretary of the Royal Society of Brussels.

Mr. Schlim, Colonel of the Staff.

Mr. Constant Detourney, Inspector in the central office of Taxes and Customs, attached to the office of the Minister of Finance.

Mr. E. Perrot, Man of Letters.

Art. 2. Mr. Quetelet will fulfil the duties of President, and Mr. Xavier Heuschling, chief of the Board of General Statistics, in the office of the Minister of the Interior, will execute those of Secretary to the foregoing commission.

Art. 3. Our Minister of the Interior is charged with the execution of the present decree.

Given at Brussels, 16th March, 1841.

(Signed) LEOPOLD.

The Minister of the Interior. LIEDTS.

Report on the State of the Polytechnic School in Paris. By an ENGLISH RESIDENT in Paris.

[*Read before the Statistical Section of the British Association, 27th August, 1841.*]

THE Polytechnic School was first established at Paris on the 28th of September, 1794 (7 Vendémiaire, An. III.), under the name of a Central School of Public Works, in virtue of a decree of the Convention, dated 11th March in the same year, for the formation of a commission of public works; and the opening of the establishment took place on the 21st of December of the same year. Its object was to supply young men for various branches of the public service, especially for the scientific departments of public works, artillery, engineers, &c.; all the public institutions for which had been entirely abandoned or suppressed in consequence of the revolution. Pupils were admitted between the ages of 16 and 20, after a previous examination in arithmetic and the elements of algebra and geometry; and the objects of their education were nearly the same as at the present day, only on a less extensive scale. The duration of their studies was three years. Part of the Palais Bourbon (now the Chamber of Deputies) was assigned for the use of the school, and a house was taken on the Quai Voltaire, (now No. 7,) for the use of some of the more promising pupils, who were then specially instructed and constituted chiefs of divisions for the superintendence and aid of their comrades. Among the professors who taught these select pupils occur the names of Monge, Barruel, Jacotot, Hachette, and Guyton. On the 21st of May, 1795, the day on which the school came into actual operation, 25 pupils d'élite were installed as chiefs of division, and their names merit commemoration. They were as follow:—Malus, Dupuis, Pattu, Fayolles, Hesse, Francœur, Bruslé, Patural, Callier, Biot, Bouvet, Lahure, St. Genys, Lancret, Hauterre, Eudel, Donop, Anselin, Cavenne, Debaudre, Riché, Lamandé, L'Evesque, Durostu, Lemaye and Durivan.

An annual allowance of 1,200 francs was made to each pupil during his residence of three years in the school: but as this was paid in paper (assignats) it was not worth more than 200 francs, and at last became entirely nominal. Pecuniary assistance was given from time to time by the Government, and even gratuitous distributions of bread had to be made, so deplorable was the condition of society at that melancholy period; but this was not sufficient, and during 1795, a considerable number of the pupils were obliged to leave the school and return home, not being able to support themselves.

In the same year, on the 1st of September, the school was re-organized, and assumed its present name of *Ecole Polytechnique*; the principal changes made in it being in the extension of the subjects of instruction. On the 16th December, 1799, a third organization took place; the number of pupils was fixed at 300; each pupil was allowed the pay of a sergeant of artillery for his support (360 francs a-year), and a sum of 20,000 francs was allotted from the public funds for annual distribution in the school. Great improvements were at the same time made in the administrative department of the school.

The fourth organization of the school took place on the 16th July, 1804, by order of Napoleon, when the school was transferred to its present locality, the buildings of the college of Navarre. At this period

the circumstances of France were so much improved, and the school had risen into such high repute, that, instead of an allowance being made to each pupil, an annual payment of 800 francs was required from them, and a sum of 42,000 francs was allowed for distribution among such as stood most in need of assistance. The opening of the school under the new regulations took place on the 22d of November, 1805 ; the strictly military character of the school was maintained, and the pupils received a flag on which was inscribed,

“ Pour la Patrie, les Sciences, et la Gloire.”

This was a very flourishing period for the school, and the number of distinguished men who were educated in it established its character all over Europe.

The behaviour of the pupils during the two sieges of Paris, when they worked some guns on the heights of Belleville, Père la Chaise, and Montmartre against the allies, and their known attachment to Napoleon, gave a ready excuse to the government of Louis XVIII. for profiting by a breach of discipline to dissolve the school, on the 13th of April, 1816. It was re-organized by a royal ordinance, on the 4th of September, in the same year ; but its military character was suppressed, a chaplain was attached to the establishment, and the uniform was abolished. The price of the annual payment was raised to 1,000 francs, as at present ; and 24 bursarships, which still exist, were then granted to it from the coffers of the state. By subsequent ordinances, passed in 1822 and 1825, the military character of the school, and the uniform, were re-established ; new courses of lectures were founded ; the time of residence was abridged to two years ; the system of public examiners was improved, and numerous other beneficial alterations were introduced.

The pupils of the school took a prominent part, as is well known, in the revolution of 1830, and aided greatly in overthrowing the government of the Bourbons. They subsequently became opposed to the policy pursued by the government of Louis Philippe, and in 1832 they made such a demonstration in favour of their principles, that the king disbanded the school. It was, however, immediately re-organized, (two partial changes having previously taken place, on the 13th November, 1830, and the 25th November, 1831,) and the Royal ordinance of 30th November, 1832, now constitutes the basis upon which the establishment exists. A further modification took place in 1836, but the alterations then effected referred merely to the suppression of political demonstrations, and to the repression of the spirit of disaffection to Louis Philippe, which still forms one of the strongest characteristics of the school. Professorships of English and German had been established since 1830, but in 1840, when a rupture with England became imminent, and public feeling in Paris and throughout France was greatly excited against Great Britain, the professorship of English was suppressed. At this period too, during the autumn of 1840, an unusual draft of pupils into the artillery and engineers took place, and orders were given for the admission of an extra number of pupils.

The system of instruction pursued in this school is almost entirely mathematical and scientific: the services for which the pupils are des-

tined being never lost sight of. They receive a certain degree of information in polite literature, but the amount bears a very small proportion to the remainder of their studies; and it is taken for granted that they possess sufficient knowledge in other branches before their admission. The main principle on which the system turns is that of perpetual partial examinations (called interrogations), which are made during the courses of lectures, and of general examination, enforced at the end of each scholastic year. These examinations of all kinds are very efficient, and are carried on with great impartiality. No respect is paid to mere personal rank in this establishment, but all the promotions and nominations are given entirely according to merit, and the spirit of competition thereby engendered is remarkably great. The preliminary examination is so extensive, and is carried into effect with such a degree of severity, that it ensures the admission into the school of none but young men of considerable talent and application, and it has the highly beneficial effect of immediately constituting the pupils into a corps d'élite. To be admitted into the Polytechnic School is one of the highest scientific distinctions which a young man can obtain in France: and to be drafted out of the school into any branch of the public service, is to ensure the future fortunes of the individual. It will be seen, in reference to the programmes of the courses of lectures, and the tables of study, that the subjects are far too numerous and important for more than a superficial knowledge of them to be imparted in the period allowed of two years: but it should be remembered that most of the pupils come already prepared with those subjects on the day of their admission; and that the studies of this school amount for them to little more than a perpetual series of examinations. In general it may be said that the average scientific acquirements of the mass of the pupils on leaving the school are equal to those of the majority of wranglers and senior optimes at Cambridge, while there are of course among their numbers distinguished men, who would compete with those at the head of the Cambridge Mathematical Tripos.

It will be observed, on a perusal of the regulations appended for the behaviour of the pupils, that they are kept under a strict system of military discipline, and as a body of young men, they are remarkable for their well-ordered and gentlemanlike deportment. The school contains no provisions for the religious instruction of the pupils, but the point of military honour is carried very high in it, and supplies the place of any ecclesiastical control. No distinctions are made on account of religious opinions; persons of any denominations are admitted, and in fact the pupils are left entirely to themselves in this matter. No bad consequences appear to ensue, judging from the conduct of the pupils in comparison with that of other young men in the metropolis; and cases of moral misconduct among them are exceedingly rare. They are always esteemed, and with justice, as the élite of the rising generation; and this is entirely attributable to the fundamental principle of the institution, that of working in earnest, and being kept to work with the greatest rigour.

Those pupils who do not pass the examinations at the end of the first year with credit, cannot go up into the second, and their chance of military or public promotion is thereby much diminished; but a similar

failure at the end of another year, or even neglect during the daily examinations of the lectures, would cause them to be immediately dismissed from the school. The places which they occupy in the examinations at the end of the second year determine their order of admission into the public service; and as only very few are annually rejected, it may be said that in general the success of a candidate in the final examinations is always followed by a commission in the artillery, the engineers, the bridges and highways, the navy, or some other branch of the public service.

The general course of studies is superintended by a Council of Instruction; and the whole system is subject to the constant supervision of a Council of Improvement. It is to the vigilance of these two bodies that the school mainly owes its efficiency. The principal officers of the school and other men of science form these councils, and the body of professors is always recruited by young men of the greatest promise, selected either from the school itself, or from the most distinguished scientific institutions of the country. A Council of Discipline watches over the internal regulations of the school, and the whole establishment is under the special jurisdiction and authority of the Minister of War.

The buildings of the school, and the adjacent ground allotted to it, (near the Pantheon) are very commodious and well arranged. The treatment of the pupils, though strict, is of a superior description; and, on the whole, it is by far the first educational establishment, excepting the *Ecole Normale*, which France possesses.

Regulations, &c.—By a law sanctioning the last Royal ordinance for the organization of the school, this institution is declared to be especially intended for the education of young men intended for the following branches of public service:—

Artillery, military and naval.

Engineers, military and naval.

Royal navy.

Army.

Engineers; hydrographers.

Staff corps, geodesic division.

Bridges, roads and mines.

Gunpowder and saltpetre manufactories.

Tobacco manufactories, and other public departments.

The course of study is limited to two years; but, although at the end of that time nearly all the pupils are sure to be placed in various public departments, the Government does not bind itself to provide for those for whom, if any, a sufficient number of places cannot be found. This case is however of extreme rarity, and in the autumn of 1840, when the preparations for war were making throughout the country, an extra number of pupils were drafted out of the school, before they had finished their studies, into the artillery, &c., and an extra number were ordered to be admitted as fresh pupils.

The price of the annual payment by the scholars is 1,000 francs per annum, payable quarterly in advance. There are 24 bursarships of 1,000 francs each, divisible into half bursarships, of which 12 are allotted to the department of the Minister of War, 8 to that of the Minister of the Interior, and 4 to that of the Minister of the Marine.

Conditions of Admission.—No pupil can be admitted into the school except after a public competition, notice of which is duly published by Government, and which is conducted by examiners in Paris as well as in certain towns in the departments.

No one can be admitted to this competition without having previously proved that he is French either by birth, or by naturalization ; and that he is more than 16 years of age, but was less than 20 on the 1st day of the year in which the competition takes place. An exception to this latter regulation is made in favour of soldiers, who are admitted to the competition, provided they have not completed their 25th year. Documents, duly authenticated, must be produced in proof of the above qualification, and also a medical certificate that the candidate has been vaccinated, or has had the small-pox ; that he has no contagious malady then upon him, and is not incapacitated by bodily infirmity or deformity, for the public service. The following is the programme of the examinations of ability for candidates for admission, taken from the official order of the Minister of War in 1841.

Programme of the Examination to be passed by the candidates for admission.—The knowledge required for admission into the Polytechnic School is as follows :—

I. Arithmetic (complete), including the theory of proportions, of progressions, of logarithms with the use of the tables, to seven places of decimals, and the explanation of the metrical system. II. Elementary geometry, including the proportions of spherical triangles. III. Algebra, including the resolution of the first two degrees, indeterminate equations of the first degree ; the theory of fractional and exponential exponents ; the demonstration of Newton's binomial theorem in the case only of positive integral exponents : the general composition of equations ; Descartes' rules of signs ; the determination of commensurable roots ; the same of equal roots ; the resolution of numerical equations by approximation, and the elimination of unknown quantities between two equations of any degree with two unknown quantities. IV. Plane trigonometry, with the use of the table of sines. V. Statics, demonstrated in the synthetical manner ; composition and decomposition of forces and couples : reduction of a system of forces to a couple and to a single force ; conditions of equilibrium of a solid body ; centre of forces parallel and co-ordinate to that centre ; determination of the centre of gravity of the triangle and pyramid ; equilibrium of simple machines, the lever, simple pulley, compound pulley, inclined plane, wedge, wheel and axle, and the screw. VI. Complete discussion of the lines represented by equations of the first and second degree, with two unknown quantities ; and the principal proportions of the conic sections. VII. The first elements of descriptive geometry, relative to the straight line and the plane. VIII. The making of architectural coloured drawings.

The candidates are further subject to the following trials :—

They will write a mathematical composition upon subjects given to them. They will have proposed to them an example of the resolution of a plane triangle, in order to show that they know the use of logarithmic tables to seven places of decimals. They will translate a passage from a Latin author of the same difficulty as that which is commonly given in the Rhetoric classes of colleges ; and they will write an essay in French upon

a subject given to them. They will be required to write a legible hand and to spell correctly. They will copy an academic study of the human figure, shaded with the crayon, after a model to be given to them. They will make correct drawings from rough plans of descriptive geometry, upon the straight line and the plane, as well as a water-coloured architectural drawing. All these drawings must bear their own signature and the *visa* of the professor, together with the date of the *visa* for each.

Candidates are informed that *all* the parts of this programme are equally obligatory, and that none can be considered as merely accessory. Candidates are liable to be excluded from the list of admission if they have not satisfied the condition of examination in literature and drawing, although on all other points they may possess more knowledge than is here required.

Candidates are only examined in the subjects required by the programme, but attention will be paid to the knowledge they may possess of physics, chemistry, and the German language.

Further regulations of admission.—No pupil can obtain a bursarship or half bursarship, unless he forms part of the first two-thirds of the admission list, nor unless he addresses a demand for it at the time of inscribing his name.

Every pupil who does not present himself to the commandant of the school within the time specified in his letter of nomination, will be considered as having resigned. On arriving at the school the pupils will be subjected to fresh examinations, in order to prove that they are really the authors of the literary compositions, drawings, and plans which they have presented. In case of fraud being detected, the pupil committing it will be excluded. Every pupil is subject to a visit from the inspecting surgeons, to prove that he has no vice of conformation, nor any infirmity, which would disable him from being admitted to the lectures, or render him unfit for the public service, in case of his devoting himself exclusively to it. No one can be received into the school without immediately furnishing his articles of outfit,* nor without remitting to the commandant a written engagement, by which his parents, or other persons answerable for him, undertake to pay to the Receiver-General of the Treasury the sum of each pupil's annual payment, if the pupil has no bursarship, or of his half payment if he has a half-bursarship, every quarter in advance. This engagement, which must be legalised by the mayor or sub-prefect of the pupil's place of residence, must be made by the pupil himself, if he is legally of age and in enjoyment of his own property.

* Outfit list required to be furnished for each pupil.—

1 coat, full uniform, blue; 1 pantaloons, full uniform, blue; 2 undress frock coats, blue; 2 pantaloons, blue; 2 pantaloons, white cotton cloth; 2 pantaloons, unbleached cloth; 4 black stocks; 1 cocked hat; 1 foraging cap; 2 pairs yellow leather gloves; 1 sword belt; 3 pairs of sheets; 12 shirts, linen; 4 drawers; 6 caps; 12 pairs of socks; 18 handkerchiefs; 12 towels; 1 clothes bag; 1 blouse, for manipulations; 2 pairs of half-boots; 2 pairs of shoes; 1 case of mathematical instruments; 3 portfolios or cartons; 1 pocket-book; drawing saucers, &c.; inkstand, and minor chemical utensils, and other minor articles. All the above articles are furnished by the administration of the school, except the linen, which may be provided by the parents if they please. The cost of the whole outfit does not exceed 600 francs (£24). All articles worn out or lost have to be replaced by the parents or guardians of the pupil; and all payments are made quarterly and in advance.

*List of Officers, Professors, &c. of the Polytechnic School for 1840.**Commandant.*—Major-General Vaillant.*Sub-Commandant.*—Colonel Espéronnier.*Inspectors of Studies.*—Captain Gloux, Captain Demiau, of the artillery; Captain Descharières, Captain Bugnot, of the Engineers.*Captain-Instructor.*—Captain Lenoble, Infantry.*Adjutants.*—Chatenet, Marguerit, Allaire, Buffa, Cachardy.*Examiners.**Examiners of Admission.*—Dinet, Lefébure de Fourcy, Bourdon, Comte.*Permanent Examiners.*—Mathieu; one vacancy.*Temporary Examiners.*—Demonferrand, Chevreul, Babinet.*Director of Studies.*—Coriolis.*Professors, Under Examiners, and Masters.**Professors of Analysis and Mechanics.*—Duhamel, Lionville.*Professor of Descriptive Geometry.*—Leroy.*Professor of Physics.*—Lamé.*Professors of Chemistry.*—Gay Lussac, Pelouze.*Professor of Geodesy, Topography, and Machines.*—Savart.*Professor of Architecture.*—Reynaud.*Professor of French Composition.*—Dubois.*Professor of German Composition.*—Hase.*Professors of Drawing, for Figures and Landscape.*—Steuben, Charlet.*Masters of Drawing, for Figures and Landscape.*—Dulong, Lalaisse, Danvin, Canon.*Master of Drawing for Topography, &c.*—Brune.*Under Examiners for Analysis and Mechanics.*—Comte, Sturm.*Under Examiner for Descriptive Geometry.*—Olivier.*Under Examiner for Physics.*—Bary.*Under Examiners for Chemistry.*—Reynault, Péligot.*Under Examiner for Geodesy, Machines, &c.*—Le Verrier.*Under Examiner for Architecture.*—Jodot.*Under Examiner for Topography and Drawing.*—Girard.*Under Examiner for French Composition.*—Saint Hilaire.*Under Examiner for German.*—Gauthier.

To the above should be added five assistant under examiners for analysis and mechanics, descriptive geometry, physics, and geodesy.

The administrative officers of the school consist of—

An administrator; treasurer; keeper of archives; librarian; physician; surgeon; keeper of stores; three conservators of scientific collections, &c.; six clerks, employed in various departments; a principal housekeeper for the linen, &c., and an inspector of buildings.

There are also various administrative officers, such as a solicitor, architect, assistant surgeons, &c. connected with the school, as well as a certain number of masters, exclusively privileged to give lessons in fencing, dancing, and music.

Salaries of the Officers, Professors, &c.—All the officers, including the commandant of the school, receive the full pay of their rank, and

have besides one-third more of their pay; the whole being paid them out of the funds of the school, which again are included in the budget of the Minister of War. The commandant further receives 4,000 francs per annum for household expenses; his house is large and handsome, and is furnished by the Government. The apartments allotted to the resident officers are in every way suited to their rank, and there are various perquisites of small amount attached to their offices. The professors do not reside.

The salaries of the professors, under examiners, &c. are as follows:—

	Francs.
Director of Studies	10,000
Examiners of Admission (each)	3,000
Permanent Examiners	6,000
Temporary ditto	2,500
Professor of Mathematical and Physical Sciences	5,000
Professor of Architecture	4,000
Professor of French and German	3,000
Professor of Drawing, and Topography (each)	2,000
Under Examiner of Mathematical and Physical Sciences	2,000
Under Examiner of Architecture	1,500
Under Examiner of Topographical Works	2,500
Under Examiner of French and German	1,500
Drawing Masters	1,200
Administrator	6,000
Treasurer	4,000
Surgeon, and Storekeeper (each)	3,000
Conservators of Collections	1,500
Adjutants	1,300

Number of Pupils, &c.—The total number of pupils in the Polytechnic School on the 1st of April, 1840, was 271, of whom 132 were in the first or senior division, and 139 in the second or junior division. Of those in the second division 4 had been directed to pass a second year in it, as not being sufficiently advanced to go up to the senior division; and of those in the first, 8 had been authorized to pass a second year in it, (or third year in the school) for various reasons. Besides the above, permission had been granted by the Minister of War to 10 young men, not pupils of the school, to attend the lectures of the first division; and to 16 to attend the lectures of the second division.

Out of the total number of pupils 2 were of British parents; 2 from the French colonies; 1 from Switzerland; 1 from Saxony, and 1 from Trebizond. Of the young men allowed to attend the lectures, not being pupils, 1 was English, 1 American, 2 Swiss, 3 Italian, 2 Greek, 1 Spanish, 2 Russian, 1 Norwegian, 1 Hessian, 1 Wurtemburger, 2 Portuguese, 1 Brazilian, and 8 French. Of the French pupils 56, or 26 per cent. were from the department of the Seine, and 13, or 5 per cent. from the department of the Moselle; the rest were from various other parts of the kingdom.

The following table exhibits the number of pupils who have been admitted into the several branches of the public service since the foundation of the establishment, and affords strong evidence of the advantage which the public has derived from the school:—

Services.	Before 1839.	In 1839.	Total.
Artillery (Marine)	58	..	58
Artillery (Military)	1,735	37	1,772
Staff Corps	31	3	34
Engineers (Marine)	123	4	127
Engineers (Military)	955	21	976
Engineers—Geographers . . .	108	..	108
Engineers—Hydrographers . .	14	..	14
Royal Navy	114	4	118
Army	123	..	123
Mines	148	7	155
Roads and Bridges	812	43	855
Powder and Saltpetre Department	20	..	20
Tobacco Department	9	2	11
Total	4,250	121	4,371

On the General Regulations for the Behaviour and Discipline of the Pupils.—These regulations, which are in 66 articles, are exceedingly precise and severe, being framed on the strictest footing of military discipline, and calculated to enforce the most prompt and absolute obedience, under heavy penalties. Their main provisions are as follows:—

After unconditional obedience to every command of their superior officers is first laid down as the basis of the rest, the pupils are strictly forbidden to hold or form any society, or secret deliberation, or to take any step towards the same; they are not allowed to be present at any ceremony of any body or association without special permission from the Commandant; nor to print anything in any periodical publication; nor to introduce any book, printed paper, or drawing into the school without special leave; nor to play at any game of chance whatever; nor to smoke; nor to assault any of their comrades; nor provoke to duel (under pain of expulsion for both parties if a challenge be accepted); nor ever to appear without their uniform in or out of the school; nor to introduce any eatables, or drink, or chemical products within the walls; nor to bring in any parties whatever, not visited by the proper officer. The pupils are strictly tied down to salute their superior officers, and to behave to them in a becoming manner; and the rules for their behaviour in the lecture rooms and in the school generally, are very precise and rigid. The days on which they are allowed to go out in the town are Sunday and Wednesday, and no others; on the former of these days, from the termination of parade at 9 $\frac{1}{4}$ A. M. to 10 P. M., and on the second day from 2 $\frac{1}{2}$ P. M. to 8 $\frac{1}{2}$ in summer and 9 in winter. The parents and guardians of the pupils, or persons furnished with authority from them, are allowed to see the pupils in the parlour of the school on Sunday and Wednesday only, from 3 P. M. to 4 $\frac{3}{4}$ P. M. Any pupil remaining absent from the school three days, without communicating the cause to the commandant, ceases to belong to it, *ipso facto*.

The various punishments inflicted on the pupils are as follows:—

1. Private censure; 2. Public censure; 3. Notice in the order of the day; 4. Confinement to walls; 5. Confinement in the *salle de police*;

6. Imprisonment within the school; 7. Imprisonment in a military prison; 8. Expulsion.

The latter can only be inflicted by an order from the Minister of War himself, on a report from the commandant of the school.

The regulations which refer more especially to the conduct of the pupils in the lecture rooms direct that perfect silence and proper behaviour shall be maintained; that the pupils shall not copy from each other's works, nor give undue assistance to each other, and shall always give explanations of their inability to answer any interrogations addressed to them by the professors or examiners. They draw by lot, on first entering the school, for the seats they shall occupy in the lecture rooms, and always retain the same. Exact notes are kept of their behaviour as well as of their proficiency, and marks are allotted accordingly.

The pupils are divided into four companies, to each of which are attached, out of their own number, a serjeant-major, a serjeant-marshal (fourrier,) and six serjeants. These pupils wear on their uniform the same gold chevrons which distinguish the sub-officers of the same grade in the army. All orders of the officers are conveyed to the pupils of each company through these sub-officers, who are further responsible for the good conduct of their comrades, and are liable to be punished for them. The sub-officers have also to inspect the meat and provisions served out, to see that the weight and quality are correct; and to make certain returns of the movements of their company. They hold their rank only for one year, but they may be re-appointed, and their promotion is considered as a mark of honourable distinction.

PROGRAMMES OF THE COURSES OF LECTURES.

I. *On Analytical Mathematics, Calculus of Probabilities, and Mechanics.*

1. *Analytical Mathematics, Differential and Integral Calculus*.*—*First year.*—On functions in general. Relation between the increment of the function and increment of the variable. Differentials of simple functions and functions of functions. Functions, algebraical, logarithmic, &c.

Differentials of functions with several variables; implicit functions, &c.

Change of the independent variable. Taylor's series for functions of one variable, &c. Application of Taylor's theorem to the developement of a binomial, exponential, &c. De Moivre's formula. Maxima and minima of functions with one or more variables. Differential of the arc of a plane curve. Equations of the tangents and normals of plane curves; asymptotes, &c. Points of inflexion, &c.; circle of curvature; contact of plane curves; involutes and evolutes of curves; tangent and normal planes, &c.

Definition of the integral of a differential function. Methods of integrating rational functions, logarithmic functions, &c. Integration by series, &c.

Methods of finding the areas of plane curves and curves of double

* The principal points only are mentioned. In general the course comprehends a complete series of information on the subject, without going too much into minute details and problem work.

curvature; cubing of solids, &c.; solids of revolution, &c.; Limits, simple and double integrals.

Second year.—Differentiation and integration under the sign \int ; determination of definite integrals. Conditions of integration for differential functions of the first order with several variables. Integration of the linear equation of the first order, and of the homogeneous equation. Particular solutions of differential equations of first order. Theorem on the integration of linear equations of any order. Elimination of variables between simultaneous differential equations. Integration by series of differential equations, &c. Elements of the method of variations. Elements of the calculus of finite differences, direct and inverse. Formulæ of interpolation. Theory of the curvature of surfaces. Radii of greatest and least curvature. Equation of lines of curvature.

2. *Elements of the Calculus of Probabilities and Social Arithmetic.*—General principles of the calculus of chances. Bernouilli's theorem. Probability of future events from antecedent observations. Mathematical angle. Application of ditto to lotteries, &c., tables of population, and mortality. Duration of life in various countries. Division of population according to age and sex. Influence of epidemic diseases.

On profit and loss of establishments depending on the probabilities of events: annuities, tontines, savings' banks, insurances, loans, &c.

3. *Mechanics. First year.*—*Statics.* Composition and equilibrium of any number of forces applied to the same point. Ditto, of parallel forces applied to given points. Momenta of parallel forces, &c.

Of the weight of bodies. Centre of gravity. Determination of ditto for the arcs and areas of curves, surfaces, and solids. Use of centre of gravity for measuring areas and volumes, &c. Attraction of spherical bodies formed of homogeneous layers on a material point, external or internal.

Dynamics.—Uniform motion; velocity; varied motion, &c.; *vis inertiae*. Movements of heavy bodies in a vertical line, or on inclined planes, &c. Attwood's machine. Vertical motion of a heavy body in a resisting medium and *in vacuo*.

General equations of the movement of a point acted on by any force. Motion of projectiles *in vacuo*. Principle of areas in the motion of a single material point. Principle of live force in systems formed of points connected two and two, on curves or surfaces. Quantity of work. Motion of a heavy point on a given curve. Theory of the simple pendulum. Isochronism of oscillations in a cycloid. Kepler's laws. Consequence of these laws deduced from the equations of motion. Absolute and relative motion of two bodies attracting each other in the inverse ratio of the squares of their distances. Determination of the masses of the earth and the planets accompanied by satellites.

Throughout this course the professors require the pupils to make all their dynamical formulæ homogeneous, and to reduce them to numbers if demanded.

Second year.—*Statics.* Conditions of equilibrium of any number of forces applied to an invariable system; whether free, or retained by a point round which it can turn in any direction, or retained by an axis round which alone it can revolve.

Funicular polygons. Equation of the catenary: application to suspen-

sion bridges. Principles of virtual velocities in the equilibrium of a point, and of simple machines, &c.

Dynamics.—D'Alembert's principle for reducing questions of motion to questions of equilibrium. Motion of two heavy bodies connected with each other. Moment of inertia. Theory of the compound pendulum. Reciprocity of centres of oscillation and suspension. Motion of the centre of gravity of a system. Principles of live force. Of the collision of spherical bodies, elastic or non-elastic. Centre of percussion. Principle of the transmission of work deduced from the equations of live force, and application of it to machines.

Second year.—*Hydrostatics.* Principle of equal pressure in fluids. Propagation of external pressure through fluids to the sides of the vessel. Principle of virtual velocities verified in the equilibrium of these pressures. General equations of the equilibrium of a fluid subjected to the action of any forces. Centre of pressure. Equilibrium of a body plunged in a heavy fluid, or floating on the surface. Conditions of stability, &c.

Hydrodynamics.—General equations of the movement of fluids subjected to the action of any force.

The general regulations stipulate that each lecture in all the above subjects, whether of analytical mathematics or mechanics, is to be preceded or followed by interrogations put by the professor. The last lectures of each part of the course may be employed in the general revision of the subjects explained in it. The professor, during the continuance of the course, gives examples to the pupils to be resolved by them, and converted, in their formulæ into numbers. The under-examiners question the pupils upon the subjects of the lectures three times a-week; and after the closing of the course of analysis, whether for the first or the second year, all the pupils are examined in the whole course by the professor and the under-examiners. The same takes place for the course of mechanics, &c.

II. *Descriptive Geometry and Analysis applied to Geometry.*

Descriptive geometry; on the straight line and the plane.

1st *Drawing Plan.*—1st Q. Through a given point in space, to draw a straight line parallel to a given straight line, and to find the real magnitude of part of this line.

2nd Q. Through a given point to draw a plane parallel to another given plane.

3d Q. To construct a plane passing through three points given in space.

2nd *Drawing Plan.*—4th Q. Two planes being given, to find the projections of their intersection.

5th Q. A straight line and a plane being given, to find the projections of the point where the straight line meets the plane.

3d. *Drawing Plan.*—6th Q. Through a given point to draw a perpendicular to a given plane, and to construct the projections of the point of meeting of the straight line and the plane.

7th Q. Through a given point to draw a straight line, cutting at right angles another straight line.

8th Q. A plane being given, to find the angles which it forms with the planes of projection.

4th *Drawing Plan.*—9th Q. Two planes being given, to construct the angle made between them.

10th Q. Two straight lines which cut each other being given, to construct the angle which they make between them.

11th Q. To construct the angle made by a straight line, and a plane given in position in space.

5th *Drawing Plan.*—12th Q. Two straight lines being given in space, to determine the position and magnitude of the line which measures their shortest distance.

Of Tangent Planes to Curve Surfaces.—6th *Drawing Plan.* 13th Q. To draw a tangent plane to a cylindrical surface: 1. Through a point on the surface. 2. Through a point out of the surface. 3. Parallel to a given straight line.

7th *Drawing Plan.*—14th Q. To draw a tangent plane to a conical surface, under the same conditions as before.

8th *Drawing Plan.*—15th Q. Through a point given on a surface of revolution, the meridian of which is known, to draw a tangent plane to that surface.

16th Q. Through a point given on a left-hand surface of the second degree, to draw a tangent plane to that surface. (The construction of this is not required.)

Intersection of Surfaces.—9th *Drawing Plan.*—17th Q. To construct the section made on a right cylindrical surface, by a plane perpendicular, to one of the planes of projection, &c., to draw the tangent to the curve of intersection, and to develope the cylindrical surface, &c.

10th *Drawing Plan.*—18th Q. To construct the intersection of a right cone, by a plane perpendicular to one of the planes of projection, tangent, and developement.

11th *Drawing Plan.*—19th Q. To construct the section made on the surface of an oblique cylinder, by a plane perpendicular to its edges, tangent and developement.

12th *Drawing Plan.*—20th Q. To construct the intersection of a surface of revolution with a plane, and the tangent to the curve of intersection.

13th *Drawing Plan.*—21st Q. To construct the intersection of two cylindrical surfaces and tangents.

22nd Q. To construct the intersection of two oblique cones and tangents.

14th *Drawing Plan.*—23rd Q. To construct the intersection of two surfaces of revolution.

Problems.—24th Q. To circumscribe a given pyramid in a sphere.

25th Q. To find a sphere touching four given planes.

15th *Drawing Plan.*—26th Q. To draw a tangent, parallel to a given plane, to a helix traced on a right cylinder with circular base.

27th Q. Through a point given on a spherical epicycloid, to draw a tangent to that curve.

28th Q. Through a given point, to draw a plane touching a sphere.

16th *Drawing Plan.*—29th Q. Through a given point, to draw a tangent plane to a surface of revolution.

Applications of Descriptive Geometry on Plans, with Notes and Numbers.—Notions of the manners of representing lines and surfaces by means of a single plane of projection, with notes and numbers.

17th *Drawing Plan.*—Different problems upon the above plans.

Shadows.—General notions on shadows.

18th *Drawing Plan.*—Shadows of a spherical niche.

19th *Drawing Plan.*—Shadows of a bridge. Shadows of an ellipsoid with three unequal axes, illuminated by a single point.

20th *Drawing Plan.*—Shadows of a Doric capital.

Linear Perspective.—General notions on perspective, and on the apparent outlines of bodies. Remarks on the vanishing point, or point of meeting of the perspectives of several parallel straight lines.

21st *Drawing Plan.*—Perspective of a pilaster placed in any manner with regard to the point of view.

22nd *Drawing Plan.*—Perspective of a vault with edges. Perspective of a winding staircase, or staircase with several flights.

23rd *Drawing Plan.*—Perspective of a fountain.

Stone Cutting.—24th to 30th *Drawing Plan.*—Various problems in stone-cutting for doorways, fitting in to sloping or circular walls, with various vaults; problems in vaulting, geometrical staircase, &c.

Timber Work.—The professor gives details on the manner in which the pressures are distributed between the various pieces of a timber roof, and on the dimensions which these pieces are required to have; and the pupils trace out a certain number of assemblages of timber work indicated by the professor.

31st *Drawing Plan.*—Different timber constructions.

32nd *Drawing Plan.*—Outline of a complete timber roof.

33rd *Drawing Plan.*—Right section of roofs.

34th *Drawing Plan.*—Winding timber staircase, with a rail.

Note.—All the drawing plans of the cutting of stone or of timber work are to be made with a metrical scale given to each pupil.

Analysis applied to Geometry of Three Dimensions.—Equations of the straight line and plane. Transformation of co-ordinates. Surfaces of the second degree, with or without centres. Diametrical planes, ellipsoid, hyperboloid, paraboloid, &c., with theorems depending on them. Circular sections, &c. Equations to surfaces, whether cylindrical, conoidal, of revolution, &c. Developable surfaces and left-hand surfaces.

Each lesson of this course is liable to be followed or preceded by an examination. Other examinations are also made by the under-examiners during the whole duration of the course; and, at the end of the course of applied analysis, the pupils undergo a general examination upon this course and upon descriptive geometry. Towards the end of the scholastic year, they are subjected to a second general examination on the other parts of the course of geometry.

III. On Hydraulics, Astronomy, and Geodesy.

Machines.—Object of machines, different kinds of movers, measure and action of force, definition of quantity of work, &c. Passive resistances, laws of friction, stiffness of cords, &c.

Principal elements of machines: transformation of movements, pulleys,

cords, straps, toothed wheels, and friction of teeth of wheels; excentric wheels; fly wheels, regulating wheels, &c.

Animated movers: simple and differential wheel and axle, capstans, cranes, presses, differential screw, percussion press, &c.

Hydraulics.—Notions and formulæ of the flow of heavy liquids by small orifices, vena fluida, friction in tubes, &c.

Physical notions on the movement of water in the open air, influence of the bed of the stream, figure of the surface, velocity at different depths, mean velocity, &c. Impulse of a current on a plane.

Pumps, valves, pistons: La Hire's pump; Bramah's pump, and hydraulic press; resistance of pumps; hydraulic ram.

Draining machines: Schemnitz's machine, water-wheels, Archimedes' screw, Dutch screw, centrifugal machines, &c.

Hydraulic wheels in an indefinite current: wheels with paddles straight and curved, reaction wheels, turbines.

Windmills: construction of the arms, interior mechanism.

Steam engines in detail: duty and effect of machines, dynamic units, means of measuring the effects of machines, dynamometers, &c.

Note.—During this course the pupils are required to make a drawing plan of toothed wheels, shewing the number of their teeth, their dimensions, intervals, &c., to be determined according to an angular velocity, chosen by the pupils themselves. The plans are only so far to be made out, that it would be possible to make such wheels exactly from the descriptions afforded by them. They are also obliged to make complete drawings and plans of an hydraulic press; a drawing of some machine from a model, and a water-colour drawing of another machine.

Astronomy and Geodesy.—Principal formulæ of spherical trigonometry, measurement of angles, measurement of time, of watches and chronometers, spiral springs, escapements, compensations, &c.

Of the diurnal apparent movement of the heavens, and of the appearances of the heavenly bodies. The sphere; astronomical instruments; the terrestrial atmosphere; table of atmospherical refractions; method of least squares.

Of the sun and its apparent movements; of astronomical longitude and latitude; right ascension and declination; the calendar; cause of the inequality of days; the seasons, &c.

Of the moon and her phases, parallax, librations, and eclipses.

Of the stars and their movements; precession of the equinoxes; nutation of the earth's axis.

Movement of the earth; movement of the planets; satellites of the planets.

Velocity of light, aberration, parallax of the sun from the passages of Venus, &c.

Comets, their orbits, &c.

Effects of gravity in producing the celestial movements.

Physical cause of the spheroidal flattening of the earth; use of the pendulum as a measure of weight; laws of gravity at the earth's surface; tides; influence of the sun and moon; tide tables.

Latitude and longitude, means of observing and determining.

Solar heat: variations of heat experienced at the same spot on the earth's surface, limits of perpetual snow, temperature of mines, &c.; dif-

ference of temperature in the northern and southern hemisphere, temperature of the ocean, &c.

Winds: monsoons, &c.; currents of the ocean.

Phænomena of terrestrial magnetism: magnetic lines on the earth's surface; intensity of magnetic forces.

Measurement of altitude with the barometer; diurnal variations of the barometer.

Geodesy.—Geodesic instruments; repeating and reflecting circles; figure of the earth; formation of a system of spherical triangles; measurement of the angles; reduction of the angles; formulæ and methods for the calculation of triangles; measurement of basis, of latitudes and azimuths.

Dialling: projection of maps applied to the methods used in the war department; drawing plans of ditto.

Each lecture in the above course is liable to be preceded or followed by an examination; and the professor, during the course, is to make at least as many examinations of the pupils in his own rooms as there are lectures. At the end of the course on machines, the pupils are examined by the professor and under-examiner on all the subjects comprised in it. A second general examination is made after the course of geodesy.

IV. *On Topography.*

The exercises of topographical drawing, for the second division of the school, are preceded by a lecture from the professor of geodesy, to acquaint the pupils with the geometrical principles adopted in executing topographical maps. The description and use of the instruments required are also explained by this professor. The pupils are exercised in making drawings of this kind throughout the two years, and their drawings are of two descriptions. The first have to be made from a drawing representing the conformation of the ground, by a system of curves of equal elevation, that is to say, by equidistant horizontal sections. In the second, the conformation of the ground has to be shewn by linear shading, proportioned in length to the elevations. Their intervals and thickness have also to be combined in such a manner as to give an exact idea of the ground when illuminated by a vertical light. On each of these drawings the objects of detail, such as rocks, rivers, limits of cultivation, trees, houses, roads, &c., are to be expressed by lines indicating their horizontal projections.

In the lettering and other particulars, the pupils have to follow the methods used in the war department. Their drawings are exhibited in the school, and their merit is determined at the end of the year.

For the drawing of the human figure and for landscape drawing, all the works executed by the candidates for admission into the school are judged of by a commission of the drawing masters attached to the establishment, and the result of their decision is submitted to the director of studies. This latter officer divides the new pupils into two classes, equal in number and skill in drawing, according to the opinions of the above-named masters; and each class is then placed under the exclusive direction of the same drawing master for the whole duration of the course of drawing, and for all kinds of it. Landscape drawing in the

second year is executed in water colours, and marks of merit are given to each drawing according to its deserts.

V. On *Architecture*.

1st Part.—General principles of the construction of edifices; system of projection for the representation of edifices; materials—stone, bricks, mortar, &c.

Foundations.—Construction and decoration of walls, columns, doors and windows, vaults, &c.; ditto in wood floors, roofs, &c.; ditto in iron, isolated supporters of floors, &c. Staircases in stone, wood, iron, &c.; chimneys, wainscoting, frame work, pointing, &c.

2nd Part.—General principles of composition applied to porches, porticos, stairs, saloons, courts, gardens, fountains, &c.

3rd Part.—Composition applied to edifices, schools, barracks, hospitals, prisons, arsenals, triumphal arches, gateways, light-houses, dwelling-houses, &c.

The pupils are required to draw, during the lecture, the sketch traced by the professor on his lecturing board, and to perform other similar exercises. After the termination of the course, there are four general competitions for the construction of edifices, according to the marks obtained in which the pupils are classed in this department at the end of the year.

The pupils are required to make four water-colour architectural drawings the first year, and three the second; the choice of subjects being left to the professor.

VI. On *Physics or Natural Philosophy*.

First Year.—1st Part.—General properties of bodies; extent; impenetrability, weights, and densities. Transmission of pressure in liquids; conditions of equilibrium of ditto. Elastic fluids, Mariotte's law, &c. Of the barometer, and other instruments for measuring the weight and pressure, &c. of the air. Specific gravities of bodies, compressibility of solids, balance of tension, &c.

2nd Part.—Thermometers: dilation of solids, liquids, gases, &c.; radiating heat, laws of, and experiments upon, &c. Conductibility of solids, liquids and gases; specific heat of ditto. Of steam; relation between elastic force of steam and its temperature. Latent heat of liquids and vapours; law of cooling in vacuo and in elastic fluids, &c.

3rd Part.—Constitution of the atmosphere, hygrometry, hygrometrical equilibrium; ditto instruments; ditto tables. Evaporation; clouds, rain, dew, &c.

4th Part.—Molecular attraction; cohesion, laws of, and proportions of matter; adhesion of disks to surfaces of liquids. Capillary attraction; attraction and repulsion of floating bodies.

5th Part.—Electricity: laws of conductibility, electrical machines, power of points, &c.; theory of latent electricity, the condenser, Leyden jar, electric batteries, &c. Of atmospheric electricity, lightning conductors, &c. Of the voltaic pile, the galvanometer, &c., chemical effects and laws of, modifying circumstances, &c.

Second Year.—6th Part.—Magnetism: magnetic phænomena, direction of magnetic needle, dipping needle, &c. Different methods of

magnetising the needle, law of magnetic attractions and repulsions, action of electric currents on magnets, &c.; mutual action of electric currents, solenoids, &c. On magnetism produced by electricity; on electricity developed by heat; thermo-electric phænomena.

7th Part.—Acoustics: production and propagation of sound in gases, liquids, and solids; velocity of sound; reflexion of ditto; intervals of ditto. Measurement of numbers of vibrations, longitudinal vibration of cords, theory of musical instruments, nodal surfaces of solid bodies in vibration, &c.

8th Part.—Optics: ray of light, umbra and penumbra, laws of intensity of light, absorption of ditto, photometers; reflexion of light, foci of ditto, images formed by ditto; simple refraction, the mirage index of refraction, foci of refraction, foci of lenses, optical centres of lenses, images formed by refracted rays; aberration of sphericity of colours considered in light, unequal refrangibility of coloured rays, measurement of dispersion, &c. The rainbow: determination of diameter and width of arcs. Of achromatism: construction of achromatic objective glasses. Description of the eye: theory of vision, optical illusions, &c.

Optical instruments: microscopes, simple and compound; camera obscura, Daguerrotype; camera lucida; telescopes: Galileo's ditto, Newton's ditto, Gregory's ditto; the Heliostat. Double refraction: law of extraordinary refraction in crystals of one axis; crystal micrometer. Polarization of light; phænomena of interferences; diffraction; coloured rings.

9th Part.—Rays of heat of different kinds; diathermanic bodies; distinction between luminous heat and dark heat; phosphorescence. Refraction of heat: maximum of colorific action of the solar spectrum; polarization of heat.

Note.—During the whole of this course, the under-examiner makes two examinations a-week for each division, and explains the philosophical instruments to the pupils,

VII. On Chemistry.

First Year.—General considerations on the nature of bodies; molecular attraction; phænomena of chemical re-actions. Hydrogen, oxygen, azote, atmospheric air. Chlorine, bromium, iodine, fluorine, sulphur, selenium, tellurium, phosphorus, arsenic, carbon, borium, silicium, potassium, sodium, &c. Water: separation of bodies in ditto, deposits in steam boilers, analysis and synthesis of water, air dissolved in water, gases combined, &c. On natural substances, acids, bases, &c.; hydrochloric acids and other combinations of hydrogen; combinations of azote, chlorine, iodine, &c., with oxygen. Fabrications and use of sulphuric acid. Combinations of selenium, phosphorus and arsenic with oxygen; oxide of carbon, carbonic acid, liquefaction and solidification of ditto. Alkaline and earthy bases, ammonia, potassium, soda, alum, magnesia, barytes, strontian, lime, &c. Phosphoretted hydrogen; Graham and Rose's experiments on this gas. Combination of carbon with hydrogen, gas for lighting oxygenated water, &c. On salts: general properties of chlorures, sal ammoniac, sea salt, and rock salt. On bromures, iodures, fluorures, &c. Sulphurated compounds, chlorates, bromates, nitrates, &c. On gunpowder; its manufacture, analysis, &c. Nitrites, sulphates,

hyposulphates, sulphites, hyposulphites, &c.; phosphate, phosphoric acid, &c.; phosphites, arseniates and arsenites, carbonates, borates, silicates, &c.; ammoniacal salts, potash, soda, &c.

Second Year.—On metals; their natural state, extraction, &c. On their oxydes, sulphures, salts, &c. On alloys used in manufactured metals: chromium, manganese, zinc; iron, metallurgy of iron, cast iron, steel, &c.; cobalt and nickel, tin, antimony, lead, copper, silver, platina, gold, &c. Mortars, cements, hydraulic cements, bricks, pottery, glass, enamel, &c.

Organic Chemistry.—General considerations on organic substances, analysis of ditto, classification of ditto. Organic acids, oxalic acid, acetic ditto; vinegar from wine, ditto from wood; formic acid, lactic, tartaric, malic, benzoic, and other acids. Pyrogenic acids, vegetable alkalis, morphine, sulphate of quinine, sugar, starch, dextrine, fabrication of beer, gums, &c. Fermentation of wine, cider, &c. Alcohol; etherification; sulphuric, oxalic, &c., ethers. Vegetable and animal greases, stearine, oleine, oils, &c. Soap-making, candle-making, &c. Essential oils, resins, &c.; cyanogen, hydrocyanic acid, &c.; chlorures of cyanogen, &c.; percussion powder, &c.; gelatine, fibrine, albumine, caseum, mucus, blood, &c.; urine, urinary calculi, bile, bilious calculi, the brain and its secretions. Colouring matters, dyeing, &c. Phænomena of respiration and germination.

Programme of the Chemical Manipulations performed by the Pupils of the Second Division.

First Year.—1st *Manipulation.* Preparation of oxygen; combustion of carbon, sulphur, &c., in oxygen; preparation of hydrogen. 2nd. Action of carbon on gases, colours, putrescent matter, &c.; preparation of bi-carbonated hydrogen, &c. 3rd. Purifications of sulphur, ditto chlorine, action on metals, &c. 4th. Preparations of iodine, ditto of azote. 5th. Analysis of air by phosphorus and by hydrogen; distillation and decomposition of water. 6th. Carbonic acid, decomposition, &c.; boric acid, &c. 7th. Protoxide of azote, azotic acid, effects on metals, &c. 8th. Sulphurous acid; hyposulphuric acid; sulphuric ditto. 9th. Chlorhydric acid, fluoric acid, engraving on glass, &c. 10th. Preparation of ammonia, ammoniacal salts, &c. 11th. Preparations of iron, zinc, tin, copper, lead, &c.; oxides of ditto, solders, bronze, &c. 12th. Oxides of aluminium, magnesium, antimony, &c.; hydrates of ditto. 13th. Fusion of sea salt; chlorures of aluminium, iron, tin, mercury, &c.; iodure of lead. 14th. Fabrication, tempering, &c., of steel; sulphures of potassium, iron, mercury, &c.; decomposition of salts by metals, crystallization of salts, &c.

First Division.

Second Year.—1st *Manipulation.* Preparation of chromate of potassium, barytes, &c.; chromate of chlorure of chrome, &c. 2nd. Protochlorure of mercury, analysis of manganese of commerce, combustion of zinc, sulfure of zinc, &c. 3rd. Pyrophoric iron, perchlorure of iron, decomposition of sulphate of iron, separation of iron from manganese, &c. 4th. Oxyde of nickel, peroxide of tin, &c. 5th. Preparation of antimony by means of sulphur, oxide of antimony, sub-nitrate of bismuth,

&c. 6th. Purple oxide of lead, nitrate of lead, &c. 7th. Nitrate of copper, deutoxide and protoxide of copper, analysis of latten, bronze, &c. 8th. Preparation of protochlorure and perchlorure of mercury, nitrate of silver, chlorure of silver, &c. 9th. Analysis of gunpowder, essay of iron and copper ore, &c. 10th. Oxalic acid: acetate of copper and lead, citric and tartaric acids, preparations of, &c. 11th. Emetic: benzoic acid, mucic acid, succinic acid, &c., preparation of, &c. 12th. Preparation of quinine: potato-starch, transformation of starch into sugar, preparation of beetroot sugar, and pectic acid. 13th. Alcoholic fermentation: preparation of sulphuric ether, oxalic ether, &c. 14th. Preparation of stearic acid; soap, analysis of, &c.; Prussian blue, fibrine, &c. 15th. Dyeing processes: indigo, Brazil wood, chrome yellow, Saxon blue, wood, vitriol, &c.

The manipulations last from six to seven hours each, and are made to coincide with the lectures in chemistry, so as to serve for examples. Each manipulation is preceded or followed by an examination; and during the course there are two weekly examinations by the under-examiners. The under-examiners attend from time to time, in the manipulation laboratories, to give instructions. At the end of the course, a general examination is made by the professor and under-examiners.

Programme of the Course of Lectures in French Composition and Literature.

This course has two objects:—I. To exercise the pupils in composition. II. To give them the true principles of taste by the study of the great writers of the last three centuries. The subjects of composition include historical, literary, and moral questions, explained *vivâ voce* by the professor, who afterwards corrects the exercises brought to him in the lecture-room, and assigns marks of merit to each performance. The second part of the course includes:—I. The explanation of the rules of composition; and, II. The comparative study of the great writers of the epoch above mentioned. The professor gives marks for the exercises, which count at the end of the year.

The programme of the course of lectures in the German language is similar in effect; only the first part of the course includes the more elementary parts of the German grammar, and exercises in pronunciation take place, as well as constant *vivâ voce* examinations. Marks of merit are given in this as in the other course (of French).

“*General Observations on the Conducting of the Courses of Lectures.*”—“Interrogations upon the subject of each course may be made at any time during the delivery of the lectures; and the professors have the right of being present at the interrogations made by the under-examiners. After each lecture and partial examination, the professors and under-examiners give marks according to the merits of the pupils; these marks are transmitted to the director of studies, together with a note on the subject of the lecture. During the second year, the interrogations or examinations are to be made in such a manner that it may be ascertained whether the pupil recollects the subjects of the first year, or has forgotten them. In each year the pupils of the first division receive independent lectures on anatomy and physiology, in order to give them

some elementary notions of the structure and principal functions of the human body. They also receive, during their hours of recreation, lectures on various of the useful arts, but attendance upon these is not compulsory. During the second year, the pupils are taken to visit several large manufacturing establishments in various branches."

Daily Distribution of Studies, &c.—The hours for rising are 6 o'clock from 6th November to 8th May, and half-past 5 from 8th May to the end of the scholastic year. The roll is called over at half-past 6 in the first period and 6 in the second. From 7 to 8 is a period of *étude libre*, during which period alone of the day the pupils are allowed to occupy themselves with drawing, if they choose—not including the drawing lectures. From 8 to 9 is allowed for breakfast. From 9 to 2 is devoted to the more important lectures and examinations of each period. From 2 to 3 dinner. From 3 to 5 is given to various exercises, fencing, dancing, military drill, music, &c. At this time of the day, too, the library is open to the pupils. From 5 to 9 is a period of *étude libre*, and of lectures and examinations in the less important subjects, drawing, French, German, &c. From 9 to half-past 9 supper, during the winter portion of the year, or from half-past 8 to half-past 9 during the summer portion. The roll is always called over at half-past 9 in the bed-chambers, and lights are extinguished at 10 on week-days or half-past 10 on Sundays. On Sundays, after breakfast, a general military parade is held from 9 to 10, after which time the pupils are allowed to go out till 10 at night; and lights must be extinguished in the bed-chambers by half-past 10. Dinner on Sundays is at half-past 2, and the library is open from half-past 9 to half-past 2. On Wednesdays the pupils are allowed to go out from 3 to 9.

General Examinations.

At the end of the scholastic year the pupils are all subjected to four general examinations, distinct from the ordinary examinations (*Interrogations Générales*), which are divided as follows:—

Second Division.

- 1st *Examination*.—Analysis; ditto applied to geometry; mechanics.
- 2nd *Examination*.—Chemistry.
- 3rd *Examination*.—Physics.
- 4th *Examination*.—Descriptive geometry and its applications; application of algebra to surfaces of second degree, &c.

First Division.

- 1st *Examination*.—Analysis; ditto applied to geometry; mechanics; effect of machines; probabilities, &c.
- 2nd *Examination*.—Chemistry.
- 3rd *Examination*.—Physics.
- 4th *Examination*.—Geodesy; description of machines, architecture, &c.

Table of the Distribution of Courses of Lectures and Examinations (Interrogations Générales).

For the Second or Junior Division (First Year of Study).					For the First or Senior Division (Second Year of Study).				
Courses.	Number of Lectures.	Time of Lectures.	Time of Examinations.		Courses.	Number of Lectures.	Time of Lectures.	Time of Examinations.	
Analysis and Geometry . .	48	{ 9 Nov. to 28 Feb.	16 March to 20 March.		Analysis and Geometry, Probabilities	35 } 41 } 76	{ 7 Nov. to 8 Feb.	2 March to 6 March.	
Statics and Dynamics . .	28	{ 21 March to 23 May.	9 June to 13 June.		Mechanics	35	{ 7 March to 26 May.	15 June to 19 June.	
Descriptive Geometry . .	66	{ 1st Part. 8 Nov. to 13 Feb.	{ 25 Feb. to 29 Feb.		Machines	28	{ 7 Nov. to 8 Feb.	24 Feb. to 28 Feb.	
		{ 2nd Part. 2 March to 10 June.			Geodesy	34	{ 29 Feb. to 27 June.	13 July to 17 July.	
		{ 13 Nov. to 7 Feb.	{ 6 July to 10 July.		Physics	30	{ 6 Nov. to 10 June.	29 June to 3 July.	
Analysis applied to Geometry	14		25 Feb. to 29 Feb.		Chemistry	36	{ 8 Nov. to 10 July.	20 July to 25 July.	
Physics	30	{ 11 Nov. to 1 June.	22 June to 26 June.		Architecture	34	{ 11 Nov. to 29 June.	8 June, &c.	
Chemistry	36	{ 6 Nov. to 8 July.	20 July to 25 July.		German	30	{ 12 Nov. to 2 June.	9 June, &c.	
French Composition . .	30	{ 7 Nov. to 4 June.			Topographical Drawing . .	29	{ 11 Nov. to 25 May.		
Topographical Drawing . .	29	{ 19 Dec. to 2 July.			Drawing (Figures and Land-scapes)	52	{ 7 Nov. to 4 May.		
Drawing (Figures and Land-scapes)	51	{ 8 Nov. to 8 May.					{ 1st Part. 11 Nov. to 25 Nov.		
		{ 1st Part. 7 Nov. to 28 Nov.			Water-colour Drawing . .	17	{ 2nd Part. 7 May to 16 July.		
Water-colour Drawing . .	18	{ 12 May to 26 June.							

Statistics of Education in Bristol. By a COMMITTEE of the STATISTICAL SOCIETY of BRISTOL.

[Read before the Statistical Section of the British Association, August 2nd, 1841.]

AT the meeting of the British Association in Bristol, in 1836, I submitted to the Statistical Section a short paper on the State of Popular Education in that city, founded on returns obtained by circular from the clergy and other ministers of religion. Those returns were professedly, and from the very nature of the mode of inquiry, partial and imperfect; but at that time, no other method was available of procuring more exact results. Since that period, however, the Statistical Society of Bristol (which owes its origin chiefly to the valuable assistance of some members of the Association, and which may be considered as one of the fruits of its meeting in Bristol) appointed a Committee (consisting of the Rev. J. E. Bromby, Arthur Biggs, and C. B. Fripp, Esquires) to investigate more carefully the state of the local population in respect to education. The inquiry was conducted by means of the same agent who had been engaged in the investigation into the condition of the working classes in Bristol, and the facts obtained are all derived from his personal visits and examination of the schools, and from the testimony of the several teachers. The task of arranging and tabulating the returns was undertaken by the Committee, and it is but justice to one member of it in particular (Mr. Arthur Biggs) to acknowledge the great pains and attention which he has devoted to this duty. The inquiry occupied altogether nearly six months of the present year (January to June) at a cost of about 25*l.*, towards which a grant of 20*l.* has been made out of the funds of the Association.

Without pretending that the returns now presented are altogether free from inaccuracies, and as perfect as might be wished, the Committee feel convinced that no pains have been spared on the part of the agent to render them in every way complete, and that no general results of this kind can so justly merit public confidence as those which have been obtained (as in this case) by the *personal* inquiry of a disinterested and impartial agent. With respect to the great majority of the schools, the information desired was obtained without much difficulty, though it not unfrequently required repeated visits to obviate objections, and supply deficiencies in the first returns. In some cases, suspicion was entertained that the inquiry had a reference to Government proceedings, and though the agent's instructions were to assure the teachers that the only object of the Society was the investigation of the truth, in a matter deeply affecting the welfare of the public, and though it would appear obvious, that to point out the wants of the people in respect to education, and to excite attention to the means of supplying them, cannot but benefit those engaged in the work of instruction, it was found impossible in some cases to get over the unwillingness of the masters to give information. This was particularly the case in respect to the *superior private and boarding schools*, as to which the returns are far more defective than for any other class. It is believed, however, that all these schools have been visited, and the number of their scholars included in the returns, though this was very generally nearly all the information that could be obtained. As these schools provide instruction only for the wealthier classes of society, it is of little consequence, perhaps, in an

inquiry of this kind, whether particulars beyond the number of scholars are obtained from them or not. We may safely trust to the natural desire of maintaining their position in society, for such improvements in the education of the higher classes, as the advance of their less instructed countrymen will render necessary.

I am not in possession of the census recently taken of the city of Bristol, which is the district comprised in the present inquiry, but as the population in 1831 was 104,378, it may now be estimated (at the average rate of 1½ per cent. per annum increase) at about 120,000. I have therefore assumed this number in comparing the proportions of instructed and non-instructed children.

The schools which formed the subject of inquiry are of six classes, viz.—

				Per centage proportion of the whole.
Infant schools	14	with 1,705 scholars		11·60
Dame schools	217	,, 3,015	,,	20·52
Common day and evening schools .	219	,, 7,900	,,	53·77
Free and endowed schools. . . .	24	,, 1,334	,,	9·08
Superior private and boarding schools	38	,, 740	,,	5·03
				<hr/>
	512	14,694		100·
Sunday schools	86	,, 7,171*	,,	
				<hr/>
Total	598	21,865		

In some of the tables a further subdivision has been adopted, with the view of distinguishing those schools which are supported entirely by the payments of the scholars from those deriving any amount of assistance from endowment or public subscription.

The tables which follow this Report are divided into *two* general classes, the first embracing the *Day* and *Evening* schools of various kinds, the other being confined to *Sunday* schools. The tables exhibit particulars respecting

- The number, age, and sex of the scholars.
- The mode in which the schools are supported.
- The dates of their establishment.
- The rates of payment by the scholars.
- The subjects proposed to be taught.
- The number of teachers.
- The libraries, clothing and other societies attached.
- The religious denomination with which they are connected.
- The average attendance, &c. &c.

They have been drawn up nearly in the same form as those published by the Manchester Statistical Society, relative to the towns of Liverpool, Manchester, and Bury, and a comparison of the returns obtained from these towns and from Bristol, will be found to offer many interesting results relative to the age, sex, and numbers of the children under instruction.

* Total number attending Sunday schools	11,684
Deduct for Sunday schools, also attending day or evening schools	4,513
	<hr/>
	7,171

The total number of schools, of which returns have been obtained, is —

Day and evening schools.	512
Sunday schools	86
Total	<hr/> 598 <hr/>

Containing 21,865 scholars, or 18·22 per cent. of the population, with 2,447 teachers.—(See Table No. 1.)

Of this total number of 21,865 attending schools of one kind or another, it is estimated that 4,727 are children either under 5 or above 15 years of age, so that the number of children between 5 and 15, attending school at the date of the inquiry, is 17,138, or 14·28 per cent. of the population.

According to the population returns of 1821, the proportion of children, from 5 to 15 years of age, is 24 per cent. of the entire population, and reckoning the present population of Bristol at 120,000, there must be 28,800 children between those ages in the city, so that 11,662 children, (or 9·72 per cent. of the population) of a suitable age for instruction, were not at school at the date of this inquiry.*

It appears that of the total number of children receiving instruction, (See Table No. 2,)

10,181 or about $8\frac{1}{2}$ per cent. of the population attend day or evening schools only. Excluding the children under 5 and above 15, the proportion will be $7\frac{3}{4}$ per cent. of the population.

4,513 or about $3\frac{3}{4}$ per cent. of the population attend both day and Sunday school; making the same exclusion as before, the proportion will be 5 per cent.

7,171 or about 6 per cent. of the population attend Sunday schools only; amounting to $1\frac{2}{3}$ per cent., if the same exclusion be made as above.

Total 21,865

* On this point I may be excused perhaps for appending a short extract from my former paper, communicated to the Association:—"The principal use of an analysis of the scholars according to their age, is to furnish the means of estimating the relative proportions of instructed and *uninstructed* in the youthful portion of the population, but no estimate of this kind that has yet been put forth can be said to be correctly framed. As children, until they have attained the age of two or three years, are not subjects of school tuition of any kind, whilst the population census includes those of all ages, no useful comparison can be made between the number of children *under* five years of age at school, and their proportion in the whole population. From the uncertainty also of the termination of the period of tuition at the other end of the scale, it is almost useless to compare the number of scholars *above* fifteen years old, with the proportion of the whole population above the same age. But with respect to the scholars between *five and fifteen*, a comparison of this sort has been drawn, and some very startling results (if they were true) have been laid before the public on high statistical authority. Thus the Manchester Statistical Society, in their 'Report on the State of Education' in that borough, (pp. 5, 19, and 21,) state that 'the whole number of children between the ages of five and fifteen being estimated at 50,000, (or one-fourth of the whole population,) whilst the number of children between the same ages under instruction amount only to 33,000, it would appear that one-third of the population between five and fifteen *are receiving no instruction whatever*.' The same mode of estimating the ratio of the instructed and uninstructed has been adopted by the Society in their Reports on Salford, Bury, and Liverpool, but there is an obvious fallacy in it which vitiates the conclusion. It is implied (though not so expressed) that, because the number of children between the ages of five and fifteen under instruction at any one time falls considerably short of the whole number of children between those ages, the residue

Sex.—Of the total number of children receiving instruction in *Day or Evening* schools, there are (See Table No. 1)—

Boys	.	.	7,825	or	$53\frac{1}{4}$	per cent.
Girls	.	.	6,869	,,	$46\frac{3}{4}$,,
Total			14,694		100	

In the *Sunday* schools, there are—Boys . . . 5,780 or $49\frac{1}{2}$ per cent.
Girls . . . 5,904 ,, $50\frac{1}{2}$,,

Total	*11,684	100
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Mode of Support.—The Table, No. 3, shews the mode in which the day and evening schools are supported. In 24 schools, containing 1,334 scholars, the education is quite free: in 42 schools, with 5,873 scholars, the expense is partially defrayed by endowments or subscriptions; and in 446 schools, with 7,487 scholars, the whole expense is borne by the scholars. In the latter class of schools the number of boys and girls is much nearer an equality than in either of the two former classes.

Date of Establishment.—Exclusive of 33 schools, the time of establishment of which could not be ascertained, it appears that, of the day and evening schools—

65	were established in or before 1820.
98	,, ,, from 1820 to 1830 inclusive.
316	,, ,, from 1830 to the present time.

The great increase within the last 10 years cannot fail to be remarked, and as no less than 285 out of the 316 schools opened in this period are schools supported wholly by the payments of the children, it is a proof that the business of the schoolmaster has not been made *worse* by the agitation and inquiry which the subject of education has of late years undergone. (See Table No. 4.)

Ages of the Children.—Table, No. 5, shews the proportion of children between 5 and 15 years, and under or above those ages, in each class of the day and evening schools. It appears that of the total number there are—

Under 5 years of age	.	.	.	3,274	or	$22\frac{1}{4}$	per cent.
Between 5 and 15	.	.	.	10,730	,,	73	,,
Above 15	.	.	.	502	,,	$3\frac{1}{2}$,,
Not ascertained	.	.	.	188	,,	$1\frac{1}{4}$,,
Total	.	.	.	14,694		100	

or supplementary number are at the same moment *altogether uninstructed*. But we must consider that very few children indeed are scholars for a *continuous* period of ten or even five years, and that out of the number appearing at any given time to be '*without instruction*,' because not then actually *at school*, there may be a large proportion who *have had* more or less instruction, but have been called from school to labour of various kinds before attaining the age of fifteen, and thus are returned as '*non-instructed*.' The only mode of really arriving at the number in any district who are '*without any instruction whatever*,' would be to obtain returns of the number under instruction according to their several ages *from year to year*, between five and fifteen, and then to compare the results with the numbers of the same ages in the whole population at the same time. Even in this way some children would appear as '*uninstructed*,' who get a little schooling from time to time, with intervals of labour, but these exceptions would not be of importance."

* From this total must be deducted 4,513 for the number of Sunday scholars, who receive daily instruction also, to obtain the number receiving Sunday instruction only.

Schools with Libraries and Societies attached.—The Table, No. 6, which exhibits the facts collected under this head, applies only to 66 schools, which derive assistance from public and private subscriptions or endowment. None of the dame or common day schools, which are supported by the payments of the scholars, have lending libraries, or clothing or benefit societies connected with them.

Rates of Payment.—The Table, No. 7, applies to schools of two general classes; those in which the total expense is borne by the scholars, and those in which there is some assistance from endowment or subscription.

In the first class it appears that the average rate of payment in—

212	dame schools, with . . .	2,934	scholars, is	0	3 $\frac{2}{3}$	per week.
58	common day schools, with	1,127	,,	0	7 $\frac{1}{3}$,,
107	ditto ditto with	2,114	,,	18	5 $\frac{1}{2}$	per quarter.
13	evening schools, with .	243	,,	0	7 $\frac{1}{3}$	per week.
18	schools, with	329	,,	rate not ascertained		
408		6,747				

In the second class the average rate of payment in

14	infant schools, with . .	1,705	scholars, is	1 $\frac{1}{2}$ d.	per week.
28	common day schools, with	4,168	,,	2 $\frac{1}{2}$ d.	,,
42		5,873			

Of the 38 superior private schools, the charge for board and instruction is in most cases so mixed together that no accurate returns could be obtained. It is thought, however, that in these schools, what may be considered as the charge for instruction alone will average about 25*l.* per scholar per annum.

Founded on these data, the following Table has been framed to obtain an approximate view of the total amount of the payments made by parents for the instruction of their children in the city of Bristol:—

		Scholars.	Estimated amount of Payment.			
			£.	s.	d.	
In 217	dame schools, with . . .	3,015 .	2,390	17	9	per annum.
177	common day schools, with .	3,479 .	10,298	11	8	,,
14	evening schools, with. . .	253 .	387	10	2	,,
<hr/>						
408		6,747	13,076	19	7	,,
38	superior schools, with . .	740 .	18,500	0	0	,,
<hr/>						
Total 446	supported by payments of .	7,487	31,576	19	7	,,

And in schools assisted by subscription is—

In 14	infant schools, with . . .	1,705	682	3	6	,,
28	common day schools, with .	4,168	1,831	6	7	,,
Total 488	schools, with	13,360	34,090	9	8	,,
24	free and endowed, with . .	1,334				
512		14,694				

This may be considered as a very near approach to the actual amount of payments by the scholars, independent of the sums raised by subscriptions, public and private, and those applied from endowments; and it shews that in the city of Bristol alone, with a population not exceeding 120,000 persons, a much larger sum is annually paid for the purposes of education, than is contributed by the State towards the instruction of the five or six millions of children in the United Kingdom.

Subjects professed to be taught.—The last Table relating to the day and evening schools would perhaps be the most important of all, could we exhibit by figures the quality and amount of the instruction afforded in the different classes of schools. But as this is to a great extent impossible, and any discussion of the quality or systems of education adopted is purposely avoided on this occasion, it may be sufficient to refer to the Table for the general numerical results under this head. (See Table No. 8.)

Sunday Schools.

The returns obtained of Sunday schools are more complete on the whole than those for any other class of schools, but in consequence of the very limited amount of instruction afforded in them, these schools cannot rank very high as subjects of statistical examination. Still it is important to ascertain to what extent they serve to supply education of some kind, to those classes who would otherwise be entirely destitute of instruction. In Bristol, the proportion of those receiving Sunday school instruction *only*, is found to be about 6 per cent. of the entire population, or rather more than 25 per cent. of the total number of children between the ages of 5 and 15. In the Tables relating to these schools it has been thought advisable to distinguish the several religious denominations with which they are connected, but in few instances are the benefits of these schools confined to the children of parents directly connected with the religious body which supports them.

It thus appears that in connexion with the—

	Schools.	Scholars.	Attend day schools also.	Per cent.
Established Church are . . .	18 containing	4,007 of whom	1,883	or 47
Other denominations are . . .	44 , ,	6,901 , ,	2,499 , ,	36
No particular denominations are . . .	5 , ,	291 } , ,	131 , ,	17
Adult Sunday schools are . . .	19 , ,	485 }		
	<hr/> 86	<hr/> 11,684	<hr/> 4,513	<hr/> 100
Attending day schools.		4,513		38.62
Receiving Sunday instruction only		<hr/> 7,171		<hr/> 61.38

The instruction in all the Sunday schools is confined to reading, with such inculcation of religious and moral duties as the system allows. There are periodical examinations in most of the schools, and prizes are given in 52 of them.

TABLE NO. 1.—*Schools and Scholars in the Borough of Bristol.*

Description.	No. of Schools.	No. of Teachers.	Scholars.		
			Boys.	Girls.	Total.
1. Supported by Payments of Scholars.					
Dame Schools	217	235	1,357	1,658	3,015
Common Day Schools	177	210	1,679	1,800	3,479
Superior Private and Boarding } Schools }	38	75	510	230	740
Evening Schools	14	14	203	50	253
Total	446	534	3,749	3,738	7,487
2. Assisted by Endowments or Subscriptions.					
Infant Schools	14	30	1,004	701	1,705
Other Day Schools	28	47	2,321	1,847	4,168
Total	42	77	3,325	2,548	5,873
3. Supported by Endowment, or Public and Private Subscriptions.					
Day Schools	5	12	80	102	182
Endowed Schools.	12	24	340	231	571
Evening Free Schools	5	23	195	112	307
Workhouse Schools	2	10	136	138	274
Total	24	69	751	583	1,334
Total receiving <i>Daily</i> Instruction	512	680	7,825	6,869	14,694
Sunday Schools	86	1,767	5,780	5,904	11,684
Total	598	2,447	13,605	12,773	26,378
Deduct for Sunday Scholars receiving Instruction, and returned } as <i>Day</i> Scholars also }					4,513
Total number of Children receiving Instruction . .					21,865

TABLE NO. 2.—*Comparative Statement of the Numbers receiving Instruction.*

	Scholars.	Per Centage of Total No. of	
		Population estimated at 120,000.	Scholars estimated at 21,865.
Attending Day and Evening Schools <i>only</i> .	10,181	8.48	46.56
Attending both Day or Evening, and Sun- } day Schools	4,513	3.76	20.64
	14,694	12.24	67.20
Attending Sunday Schools <i>only</i>	7,171	5.98	32.80
Total	21,865	18.22	100
Number of Scholars estimated to be under } 5 and above 15 Years of Age. . . . }	4,727		
Children between 5 and 15 attending School	17,138	14.28	
Estimate of the total number of Children in } the Borough between 5 and 15 Years old, } (24 per cent. of Population). . . . }	28,800		
Estimated number of Children between 5 and } 15 Years old, <i>not</i> receiving any Instruction } at School (at the period of this Inquiry)* }	11,662	9.72	
Proportion of Children between 5 and 15 } receiving no Instruction <i>at School</i> , to total } number of Children of same Ages . . }	40.5 per Cent.		

* See p. 252 for remarks on this comparison.

TABLE NO. 3.—*Day and Evening Schools.—Statement of the mode in which the Schools are supported.*

Mode of Support.		Schools.	Scholars.		
			Boys.	Girls.	Total.
<i>Free.</i>					
No part of the expense borne by the Scholars	{ Clothes, Board, and Education provided }	10	374	326	700
	{ Clothes and Education provided }	8	140	145	285
	{ Education only provided }	6	237	112	349
Total		24	751	583	1,334
<i>Not Free.</i>					
Part of the expense borne by the Scholars	{ Infant Schools }	14	1,004	701	1,705
	{ Other Day Schools }	28	2,321	1,847	4,168
Total		42	3,325	2,548	5,873
The whole expense borne by the Scholars	{ Dame Schools }	217	1,357	1,658	3,015
	{ Common Day Schools }	177	1,679	1,800	3,479
	{ Evening Schools }	14	203	50	253
	{ Superior and Boarding Schools }	38	510	230	740
Total		446	3,749	3,738	7,487
Total of all Classes .		512	7,825	6,869	14,694

TABLE NO. 4.—*Day and Evening Schools.—Dates of Establishment.*

Description.	In or before 1820.	1821 to 1830.	Since 1830.	Not ascertained.	Total.
<i>1. Supported by Payments of Scholars.</i>					
Dame Schools	18	40	153	6	217
Common Day Schools	23	40	108	6	177
Superior Private and Boarding Schools . . . . .	..	4	14	20	38
Evening Schools	2	2	10	..	14
Total	43	86	285	32	446
<i>2. Assisted by Endowments or Subscriptions.</i>					
Infant Schools . . . . .	..	4	10	..	14
Other Day Schools	9	7	11	1	28
Total	9	11	21	1	42
<i>3. Wholly Supported by Endowment or Subscription.</i>					
Day Schools	1	..	4	..	5
Evening Free Schools . . . .	..	..	5	..	5
Endowed Schools	12	..	..	..	12
Workhouse Schools . . . . .	..	1	1	..	2
Total	13	1	10	..	24
Total of all Classes	65	98	316	33	512

TABLE No. 5.—*Day and Evening Schools.—Ages of the Children.*

Description of Schools.	Under 5 Years.	Between 5 and 15 Years.	Above 15 Years.	Not as- certained.	Total.	Per Cent. of Total Number of Scholars.
Infant Schools . .	1,143	562	..	..	1,705	11·60
Dame Schools . .	1,353	1,662	..	..	3,015	20·52
Day and Evening Schools, supported by payments of the Scholars	610	2,883	189	50	3,732	25·40
Superior Private Schools	38	426	138	138	740	5·03
Day and Evening Schools, assisted by Endowments or Subscriptions . .	105	4,062	1	..	4,168	28·37
Free and Endowed Schools	25	1,135	174	..	1,334	9·08
Total . .	3,274	10,730	502	188	14,694	100
Per Centage of Ages	22·28	73·02	3·42	1·28	100	

TABLE No. 6.—*Schools with Libraries and Societies attached to them.*

Description.	Infant		Day and Evening		Endowed		Total	
	Schools	Scho- lars.	Schools.	Scho- lars.	Schools.	Scho- lars.	Schools.	Scho- lars.
With a Lending Library only . .	..	..	2	646	3	257	5	903
With a Clothing Society only . .	2	260	6	853	..	..	8	1,113
With a Lending Library and Clothing Society	..	..	3	538	2	60	5	598
With a Clothing Society and Sav- ings' Bank . .	..	..	1	122	..	..	1	122
With a Lending Library, Cloth- ing and Benefit Societies, and Savings' Bank . .	..	..	1	409	..	..	1	409
Total . .	2	260	13	2,568	5	317	20	3,145
Without any Li- brary or Society	12	1,445	15	1,600	19	1,017	46	4,062
Total of Schools assisted more or less by Subscrip- tions or Endow- ments	14	1,705	28	4,168	24	1,334	66	7,207

TABLE No. 7.—*Day and Evening Schools.—Rates of Charge in Schools supported wholly or in part by Payments of the Scholars (exclusive of superior Schools).*

Charges.	Total Expense borne by Scholars.												Assisted by Endowment or Subscription.			
	Dame Schools.				Common Day Schools.				Evening Schools.				Infant Schools.		Common Day Schools.	
	Schoo- ls.	Scho- lars.	Rate.	Schoo- ls.	Schoo- ls.	Scho- lars.	Rate.	Schoo- ls.	Scho- lars.	Rate.	Schoo- ls.	Scho- lars.	Schoo- ls.	Scho- lars.	Rate.	Rate.
Weekly charge in.	18	287	d.	2	34	s.	d.	1	154	d.	5	523	14	3,143	d.	1
"	114	1,379	2	21	391	0	1	4	25	1½	9	1,182	1	50	2	1½
"	49	721	3	28	531	0	6	6	42	6			5	318	2	2
"	26	412	4	2	46	0	8	1	12	8			2	172	2½	2½
"	1	24	6	2	43	0	9	1	10	9				355	3	3
"	3	85	8	3	82	0	10	1	10	10			4	130	8	8
"	1	26	9			1	0						2			
"			10													
Quarterly charge in.				4	73	8	0									
"				6	125	10	0									
"				17	302	10	6									
"				6	117	12	0									
"				15	204	15	0									
"				36	658	21	0									
"				3	84	25	0									
"				19	539	30	0									
"				1	12	42	0									
Average { Per Week in .	212	2,934	3½	58	1,127	0	7½	13	243	7½	14	1,705	28	4,168	2½	2½
Charge { Per Quarter in .				107	2,114	18	5½									
Not ascertained	5	81		12	238			1	10							
Total	217	3,015		177	3,479			14	253		14	1,705	28	4,168		

NOTE.—The rates of charge varying in some of the schools, according to the subjects taught, the highest charge has in such cases been taken.

TABLE No. 8.—*Day and Evening Schools.—Subjects professed to be taught in each Class of Schools.*

Description.	Number of Schools.	Reading.	Writing.	Arithmetic.	Needlework.	Knitting.	Grammar.	Geography.	History.	Drawing.	Classics.	Mathematics.	Mensuration.	Navigation.	Music.	Domestic Duties.	Moral Duties.	Religious Duties.	French.	Age of			Refused Information.	
																				Eldest.	Youngest.	Average.		
1. Supported by Scholars.																								
Dame Schools . . .	217	217	31	4	174	3	4	..	1	..	..	..	..	..	..	..	..	128	129	..	14	11	6 $\frac{3}{4}$	..
Common Day Schools . .	177	174	172	165	127	11	143	137	111	25	..	..	3	..	..	..	161	158	..	4	19	4	10	..
Evening Schools . . .	14	14	14	14	..	..	1	1	..	..	..	..	..	..	..	1	..	..	..	..	36	5	..	..
Superior Private Schools	38	15	18	18	..	..	17	17	17	17	18	16	16	..	..	..	18	18	18	12	20	6	13 $\frac{1}{2}$	20
Total.	446	420	235	201	301	14	165	155	129	42	21	18	19	..	..	1	307	305	16	..	..	..	..	23
2. Assisted by Subscription, &c.																								
Infant Schools . . .	14	14	8	6	8	2	..	..	2	..	..	..	..	..	..	..	14	14	..	..	11	1	5 $\frac{1}{4}$	..
Common Day Schools . .	28	28	27	24	21	9	16	17	11	..	..	1	..	..	..	..	28	28	..	..	17	3	9	..
Total.	42	42	35	30	29	11	16	17	13	..	..	1	..	..	..	..	42	42	..	..	..	..	..	..
3. Supported by Subscription, &c.																								
Common Day Schools . .	5	5	4	4	5	5	4	4	1	..	..	..	..	..	..	..	5	5	5	5	19	4 $\frac{1}{2}$	13	..
Evening Free Schools . .	5	5	5	4	..	..	1	2	2	1	..	..	..	..	..	..	..	5	5	5	56	6	20	..
Endowed Schools . . .	12	12	11	10	7	4	9	7	7	2	2	3	3	2	1	3	6	12	12	12	16	6	11	..
Workhouse Schools . . .	2	2	2	1	2	2	1	1	1	..	..	..	..	..	..	..	2	2	2	2	15	1	8	..
Total.	24	24	22	19	14	11	15	14	11	3	2	3	3	2	1	3	13	24	24	24	..	..	..	..
Total of all Classes.	512	486	292	250	344	36	196	186	153	45	23	22	22	2	1	4	362	371	40	..	..	..	..	23

SUNDAY SCHOOLS.

TABLE No. 1.—Summary of Sunday Schools, Teachers, and Scholars.

Religious Denominations.	Number of Schools.	Number of Teachers.	Scholars.			Average Attendance.		Average Attendance per School.	Number Attending Day Schools also,
			Boys.	Girls.	Total.	Number.	Per Cent of Number on Books.		
Established Church . . .	18	334	2,242	1,765	4,007	3,018	75.3	168	1,883
Wesleyan Methodist . . .	12	372	1,036	1,279	2,315	1,773	76.5	148	1,773
Primitive Methodist . . .	2	26	67	71	138	115	83.3	57	55
Welsh Methodist . . .	1	3	12	5	17	12	70.6	17	17
Independent . . .	14	354	1,130	1,391	2,521	1,963	77.8	140	1,058
Baptist . . .	8	464	567	733	1,300	924	71.1	115	1,392
Society of Friends . . .	2	26	175	63	238	200	84.0	100	20
Unitarian . . .	2	36	86	80	166	150	90.3	75	101
Congregationalist . . .	1	12	44	40	84	75	89.3	75	53
Moravian . . .	2	33	42	80	122	66	54.1	33	30
No particular Denomination	5	31	131	160	291	190	65.3	38	111
Adult Sunday Schools* . .	19	76	248	237	485	303	62.5	16	20
Total	86	1,767	5,780	5,904	11,684	8,789	Average. 75.2	Average. 102	4,513

* 14 of these schools are supported by the Bristol Adult School Society; 1 by members of the Established Church; 1 by Independent Dissenters; and 1 by Welsh Baptists, Methodists; and Independents; but like the Sunday Schools for children, they are open to persons of any denomination. In one of these schools the scholars attend on Thursday evening, and in another on Tuesday and Friday, in addition to the Sunday.

TABLE No. 2.—*Sunday Schools.—Ages of the Scholars.*

Religious Denomination.	Under 5 Years.	Between 5 and 15.	Above 15 Years.	Total.	Eldest.	Young- est.
Established Church. . .	111	3,783	113	4,007	19	3
Wesleyan Methodist . .	56	2,213	46	2,315	19	4
Primitive Methodist . .	14	121	3	138	16	4
Welsh Methodist . . .	1	16	..	17	13	3
Independent	31	2,363	127	2,521	19	3
Baptist	37	1,202	61	1,300	19	4
Society of Friends . . .	..	193	45	238	18	5
Unitarian . . . . .	..	161	5	166	17	6
Congregationalist . . .	5	79	..	84	14	4
Moravian	10	110	2	122	15	5
No particular Denomination	13	257	21	291	16	4
Adult Schools . . . . .	..	..	485	485	80	16
Total	278	10,498	908	11,684	..	..
Per Cent.	2.38	89.85	7.77	100	..	..

TABLE No. 3.—*Sunday Schools.—Date of Establishment.*

Religious Denomination.	In or before 1820.		From 1820 to 1830 inclusive.		Since 1830.		Not Ascertained.		Total.	
	Schools.	Scholars.	Schools.	Scholars.	Schools.	Scholars.	Schools.	Scholars.	Schools.	Scholars.
Established Church	5	1,621	3	432	10	1,954	..	..	18	4,007
Wesleyan Method- ist . . . . .	..	..	..	..	..	..	12	2,315	12	2,315
Primitive Method- ist . . . . .	..	..	..	..	2	138	..	..	2	138
Welsh Methodist .	1	17	..	..	..	..	..	..	1	17
Independent . . .	..	..	..	..	..	..	14	2,521	14	2,521
Baptist	1	122	..	..	2	325	5	853	8	1,300
Society of Friends	2	238	..	..	..	..	..	..	2	238
Unitarian . . . . .	..	..	..	..	2	166	..	..	2	166
Congregationalist	..	..	..	..	1	84	..	..	1	84
Moravian . . . . .	..	..	2	122	..	..	..	..	2	122
No particular De- nomination . . .	..	..	2	115	3	176	..	..	5	291
Adult Schools . .	7	148	3	74	9	263	..	..	19	485
Total	16	2,146	10	743	29	3,106	31*	5,689	86	11,684

* 12 Wesleyan, returned as established "1804 to 1840."
 14 Independent, returned as established "1800 to 1841."
 5 Baptist, returned as established "1808 to 1834."

TABLE No. 4.—*Sunday Schools.—Statement of the Number of Scholars entered within the last Year.*

Religious Denomination.	In Schools.	Containing Scholars.	No. Entered in last Year.	Not Ascer- tained.		Total.		Usual time at School.	Longest time at School.
				Schools.	Scholars.	Schools.	Scholars.		
Established Church . . .	11	2,381	924	7	1,626	18	4,007	Yrs. 2 to 4	Yrs. 10
Wesleyan Methodist . . .	12	2,315	1,310	..	..	12	2,315	2½ to 4	13
Primitive Methodist . . .	*2	138	138	..	..	2	138	..	..
Welsh Methodist . . .	..	..	..	1	17	1	17	..	6
Independent . . .	14	2,521	1,174	..	..	14	2,521	1½ to 4	14
Baptist . . .	6	1,101	533	2	199	8	1,300	2 to 4	11
Society of Friends . . .	2	238	122	..	..	2	238	2½	6
Unitarian . . .	..	..	..	2	166	2	166	4	7
Congregationalist . . .	..	..	..	1	84	1	84	..	..
Moravian . . .	2	122	100	..	..	2	122	4	12
No particular Denomi- tion† . . .	5	291	210	..	..	5	291	..	6
Adult Schools . . .	..	..	..	19	485	19	485	..	..
Total . . .	54	9,107	4,511	32	2,577	86	11,684	..	..

* Established this year.

† In one of these schools, (the Bethel Union,) containing at the date of the inquiry 35 scholars, the number entered last year was 39. Two other of these schools (containing 141 scholars) were established this year.

TABLE No. 5.—*Sunday Schools.—Libraries and Societies attached to Sunday Schools.*

Religious Denomination.	Schools having attached					Total.
	A Lending Library.	A Clothing Society.	A Benefit Society.	A Savings Bank.	Without any Society.	
Established Church . . .	9	6	3	1	7	18
Wesleyan Methodist . . .	12	2	..	..	..	12
Primitive Methodist . . .	1	..	..	..	1	2
Welsh Methodist . . .	..	..	..	..	1	1
Independent . . .	10	4	2	1	4	14
Baptist . . .	1	..	..	..	7	8
Society of Friends . . .	1	..	..	..	1	2
Unitarian . . .	2	2	..	..	..	2
Congregationalist . . .	..	..	..	..	..	1
Moravian . . .	2	..	..	..	..	2
No particular Denomination	1	..	..	..	4	5
Adult Sunday Schools . . .	..	..	..	..	19	19
Total . . .	39	14	5	2	44*	86

* Some of the schools, besides a lending library, have one or more of the Societies connected with them, which explains what might otherwise be supposed to be an error in the number of schools "without any society attached." This is correctly stated as 44; and the schools with libraries, &c., amount to 42.

Table of the Income of Scientific and Literary Societies in England, and the Amount paid for Rates and Taxes in the Year 1840.
 By ARTHUR RYLAND, Esq. (Laid before the Statistical Section of the British Association, 30th July, 1841.)

Names of Societies.	Income.		Total Rates and Taxes.		Proportion to Income.	Window Tax.		Poor Rates.		City or Borough Rates.	
	£.	s. d.	£.	s. d.		£.	s. d.	£.	s. d.	£.	s. d.
Ashton-under-Lyne Mechanics' Institution	140	0 0	1 5 8	$\frac{1}{109}$		.	.	1 5 8	.	.	.
Bath Royal Literary and Scientific Society	444	11 10	29 3 10	$\frac{1}{15}$		.	.	29 3 10	.	.	.
„ Mechanics' Institution	138	6 6	6 18 6	$\frac{1}{20}$		6	18 6	.	.	.	.
Beverley	49	16 0	0 2 0	$\frac{1}{49}$		.	.	.	.	.	.
Beccles Public Library	90	0 0	Gratuitous use of a Corporation building.			.	.	.	.	.	.
Belper Mechanics' Institution	70	0 0	Included in rent.			.	.	.	.	.	.
Bolton	200	4 4	None.			.	.	.	.	.	.
Brentford	.	.	None; excused.			.	.	.	.	.	.
Bridport	.	.	Excused.			.	.	.	.	.	.
Bristol Literary and Philosophical Society	650	0 0	41 15 0	$\frac{1}{15}$		.	.	15 15 0	26 0 8	0 0	0
„ Mechanics' Institution	249	4 0	8 6 8	$\frac{1}{30}$		.	.	3 10 0	4 16 8	0 0	0
Birmingham Philosophical Institution	431	10 0	68 9 0	$\frac{1}{6}$		8	19 0	34 5 0	25 5 0	0 0	0
„ Old Library	700	0 0	17 11 0	$\frac{1}{40}$		.	.	8 2 0	9 9 0	0 0	0
„ New Library	290	0 0	20 2 6	$\frac{1}{14}$		.	.	13 2 6	7 0 0	0 0	0
„ Mechanics' Institution	400	0 0	34 13 9	$\frac{1}{11}$		6	3 5	16 12 4	11 18 0	0 0	0
„ Society of Arts	335	0 0	68 8 0	$\frac{1}{5}$		.	.	41 18 0	26 10 0	0 0	0
Bury Mechanics' Institution	200	0 0	1 4 3	$\frac{1}{160}$		.	.	0 16 0	0 8 3	0 0	0
Chichester Mechanics' Institution	92	10 0	8 9 7	$\frac{1}{11}$		4	13 7	2 18 0	0 18 0	0 0	0
Cambridge	237	0 0	11 12 7	$\frac{1}{20}$		3	7 11	6 14 0	1 10 8	0 0	0
Chertsey	120	1 0	1 15 6	$\frac{1}{67}$		.	.	.	.	.	.
Chippenhams Literary and Scientific Institution	45	0 0	In rent.			.	.	.	.	.	.
Cockermouth Mechanics' Institution	10	0 0	In rent.			.	.	.	.	.	.
Cornwall Royal Polytechnic Society, Falmouth	350	0 0	Nominal.			.	.	.	.	.	.
Chester Mechanics' Institution	77	10 0	3 2 0	$\frac{1}{25}$		.	.	1 12 0	1 10 0	0 0	0
Cheltenham Literary and Philosophical Society	205	16 0	30 0 0	$\frac{1}{7}$		.	.	.	.	.	.
„ Mechanics' Institution	.	.	Exempted.			.	.	.	.	.	.
Colchester	77	0 0	6 0 0	$\frac{1}{13}$		.	.	5 0 0	1 0 0	0 0	0
Darwen	170	0 0	1 13 9	$\frac{1}{100}$		.	.	1 0 3	0 13 6	0 0	0

Table of the Income of Scientific and Literary Societies in England—continued.

Names of Societies.	Income.		Total Rates and Taxes.		Proportion to Income.	Window Tax.		Poor Rates.		City or Borough Rates.	
	£.	s. d.	£.	s. d.		£.	s. d.	£.	s. d.	£.	s. d.
Manchester Mechanics' Institution	900	0 0	40	10 11	$\frac{1}{22}$	.	.	20	16 3	19	14 8
" Natural History Society	844	0 0	40	6 2	$\frac{1}{21}$	.	.	11	13 3	28	12 11
" Athenæum	2,000	0 0	198	6 0	$\frac{1}{10}$	.	.	.	.	.	.
" Lyceum, Great Ancoats' Street	201	0 0	5	15 7	$\frac{1}{40}$	.	.	2	18 4	2	17 3
" Chorlton on Medlock	230	0 0	12	15 5	$\frac{1}{19}$	6	3 5	3	12 0	3	0 0
" Portico Library and News Room	1,050	0 0	57	6 8	$\frac{1}{18}$	.	.	28	4 1	29	2 7
" Mansfield Mechanics' Institution	25	0 0	2	13 10 $\frac{1}{2}$	$\frac{1}{9}$	.	.	1	3 6	1	10 4 $\frac{1}{2}$
Morpeth . . . . .	.	.	None.	.	.	.	.	.	.	.	.
Newcastle Literary and Philosophical Society	1,300	0 0	20	0 0	$\frac{1}{65}$	.	.	.	.	.	.
North Shields Mechanics' Institution	37	0 0	0	15 0	$\frac{1}{49}$	.	.	0	15 0	.	.
Newcastle-under-Lyne Literary and Philosophical Society	72	7 6	5	17 7	$\frac{1}{12}$	0	15 2	3	0 8	2	1 9
Portsmouth Mechanics' Institution	25	0 0	3	3 0	Chargeable but not paid.	.	.	.	.	.	.
Plymouth Philosophical Society . . . . .	.	.	Exempted.	.	.	.	.	.	.	.	.
Preston Mechanics' Institution	146	10 7	1	14 10	$\frac{1}{81}$	.	.	1	14 10	.	.
Pudsey	26	0 0	In rent.	.	.	.	.	.	.	.	.
Richmond Literary and Philosophical Institution	110	0 0	In rent.	.	.	.	.	.	.	.	.
" Mechanics' Institution	80	0 0	In rent.	.	.	.	.	.	.	.	.
" Rochdale Literary and Philosophical Society	60	0 0	In rent.	.	.	.	.	.	.	.	.
Ross Mechanics' Institution	102	5 0	In rent.	.	$\frac{1}{12}$	.	.	6	13 4	1	4 0
Rochester Philosophical Institution . . . . .	.	.	7	17 4	.	.	.	.	.	.	.
Sheffield	300	0 0	Included in rent.	.	.	.	.	.	.	.	.
Salford Lyceum . . . . .	.	.	Excused.	.	.	.	.	.	.	.	.
" Mechanics' Institution . . . . .	.	.	Excused.	.	.	.	.	.	.	.	.
South Wales Royal Institution	120	0 0	New building	.	not assessed.	.	.	.	.	.	.
Stourbridge Mechanics' Institution	87	0 0	Excused.	.	.	.	.	.	.	.	.
Staines Philosophical Institution	120	1 0	6	5 0	$\frac{1}{14}$	.	.	.	.	.	.
" Mechanics' Institution	90	0 0	4	15 6	$\frac{1}{80}$	.	.	.	.	.	.
Stockton	169	1 0	1	2 6	$\frac{1}{34}$	.	.	0	15 0	0	17 6
Shropshire and North Wales Natural History Society . . . . .	.	.	4	18 8	.	2	4 9	1	12 6	1	1 5

[illegible]

ABSTRACT:

Total Number of Societies	.	.	.	.	.	.	112
Number of which the Amount of Income is stated	.	.	.	.	.	.	91
Amount of their Income	.	.	.	.	.	.	£36,793. 14s.
Number of which the Amount of Rates and Taxes is stated	.	.	.	.	.	.	76
Amount of Rates and Taxes	.	.	.	.	.	.	£1,787. 15s. 8d.
Number of which the Amount both of Income and Rates and Taxes is stated	.	.	.	.	.	.	82
Amount of their Income	.	.	.	.	.	.	£36,787. 5s. 0½d.
Amount of their Rates and Taxes	.	.	.	.	.	.	£1,787. 15s. 8d.
Per Centage Proportion of Rates and Taxes to Income	.	.	.	.	.	.	4½ per cent.

Effects of the Metropolitan Police Act (2 and 3 Vic., cap. 47, sec. 42), requiring Public Houses to be closed on the Sabbath Morning.

[Read before the Statistical Society of London, May 17th, 1841.]

By the Metropolitan Police Act, passed in 1839 (2 and 3 Vic., cap. 47, sec. 42), all public houses and places for the sale of spirituous liquors within the metropolitan police district were obliged to be closed at twelve o'clock on Saturday night, and were not allowed to be re-opened, except for travellers, until one o'clock on Sunday afternoon. The effect produced by this enactment in diminishing the prevalence of tippling, and consequently of drunkenness, on the Sabbath, is shewn by the following statement to have been very remarkable, and will afford great satisfaction to those who desire the Sabbath to be to all, as it was intended, a day of rest and edification, instead of a day of unholy excitement or brutal excess.

The Council of the Statistical Society has been favoured by the Commissioners of Police with two statements of the number of persons apprehended for Drunkenness within the metropolitan police district during the first five months of the year 1840 (four months after the Act above referred to had come into operation), and during the corresponding period of the two preceding years.* The first table shews the total number apprehended, and the second furnishes the number apprehended between the hours of twelve on Saturday night and twelve on Sunday night. The difference indicates the number apprehended during the six week days. From these data the following results are drawn:—

The total number of drunken persons apprehended on the Sunday during the first five months of 1840 was 1,328, and in the first five months of 1838-39, taking the average of the two years, 2,301; so that the total decrease in 1840 was 981 or 42 per cent.

The diminution is general throughout the whole district, but it varies in the different divisions. In six out of the seventeen divisions it does not amount to 20 per cent.; thus in Camberwell it is only 2 per cent., and in Stepney 8 per cent. In three it is between 20 and 40 per cent., and in the remaining eight divisions it exceeds 40 per cent. The most marked decrease is in the divisions situated in the centre of the metropolis. In the Holborn division it is 48 per cent., in the Covent Garden division 52 per cent., and in the St. James's division 79 per cent.

That this result is the consequence of the measure of closing the public houses in the early part of the Sunday, and not to any general increase of temperate habits among the class of persons frequenting these houses, is shewn by these tables; for while there were 981 persons less apprehended on the Sunday, during the five months of 1840, 276 more were apprehended on the other days of that year, which increase is equal to $3\frac{1}{4}$ per cent. The total decrease, therefore, throughout the week is thus reduced to 7 per cent.; the great decrease on the one day being nearly counterbalanced by the small increase of six days. There is, however, the positive benefit of a decrease of one-fourteenth throughout the week, and of two-fifths on the Sabbath, to which must be added this important result; that the great increase during the week-days has occurred chiefly in those divisions in which the decrease was least on the Sunday, and that there has been but a slight increase, or even a diminution, on the week-days, in *all* those divisions in which the

* In the subjoined Statement the mean of the two years, 1838-39, is exhibited.

greatest decrease occurred on the Sunday. This fact proves that the increase of temperance on the Sunday has not tended to promote the prevalence of drunkenness on the week-days; and that a favourable difference throughout the week may be remarked in those parts in which the improvement on the Sunday was the greatest.

Return of the Number of Persons taken into Custody for Drunkenness by the Metropolitan Police, distinguishing those apprehended on the Sabbath, in the first Five Months of 1840, compared with the same period in 1838-39.

Divisions.	Locality.	Total Number apprehended in first 5 Months.		Number apprehended between 12 P.M. on Saturday, and 12 P.M. on Sunday.		Number apprehended on the Week Days.		Per Centage of Change in 1840, compared with 1838-39, on		
		Mean of 1838-9.	1840.	Mean of 1838-9.	1840.	Mean of 1838-9.	1840.	The whole Week.	Sundays.	Week Days.
A.	Whitehall . .	157	120	27	22	130	98	23 -	18 -	24 -
B.	Westminster . .	879	802	218	122	661	680	9 -	44 -	3 +
C.	St. James's . .	1,378	948	407	85	971	863	31 -	79 -	11 -
D.	Marylebone . .	718	737	133	115	580	622	3 +	17 -	7 +
E.	Holborn . .	370	325	94	49	276	276	12 -	48 -	0
F.	Covent Garden	1,078	1,014	266	126	812	888	6 -	52 -	9 +
G.	Finsbury . .	840	1,080	251	176	589	904	28 +	30 -	53 +
H.	Whitechapel . .	549	511	134	79	415	432	7 -	41 -	4 +
K.	Stepney . .	574	689	154	141	420	548	20 +	8 -	30 +
L.	Lambeth . .	630	649	76	42	554	607	3 +	44 -	9 +
M.	Southwark . .	756	562	148	89	608	473	25 -	40 -	22 -
N.	Islington . .	281	298	65	45	216	253	6 +	30 -	17 +
P.	Camberwell . .	215	276	46	45	169	231	28 +	2 -	36 +
R.	Greenwich . .	352	210	75	61	277	149	40 -	19 -	46 -
S.	Hampstead . .	338	325	62	41	276	284	4 -	34 -	3 +
T.	Kensington . .	392	233	104	53	288	180	40 -	49 -	37 -
V.	Wandsworth . .	121	147	33	29	88	118	21 +	12 -	34 +
Total . .		9,631	8,926	2,301	1,320	7,330	7,606	7 -	42 -	34+

MISCELLANEOUS.

Table of the Imports of Cattle and Grain into Liverpool from Ireland, in the Years 1839 and 1840.

Description.		1840.			1839.
		1st Half Year.	2nd Half Year.	Total.	Total.
Cows	No.	30,101	56,555	86,656	104,897
Sheep	„	48,522	153,527	202,049	193,101
Pigs	„	111,429	65,217	176,646	284,835
Horses	„	1,695	2,343	4,038	5,654
Mules	„	71	144	215	212
Calves	„	110	357	467	1,488
Lambs	„	12,509	4,256	16,765	21,807
Wheat	Qrs.	29,140	31,491	60,631	64,333
Oats	„	138,690	103,238	241,928	264,098
Barley	„	10,270	8,667	18,937	7,317
Rye	„	191	46	237	615
Beans	„	4,485	1,645	6,130	4,401
Peas	„	213	235	448	962
Malt	„	940	1,309	2,249	451
Meal	Loads	140,367	104,436	244,803	216,375
Flour	Sacks	18,459	13,658	32,117	104,655

No. 2.—Table of the Quantities of Corn imported into Liverpool during each Year, ending 1st October, from 1837-38 to 1839-40.

	1837-38.				1838-39.				1839-40.			
	Ireland.	Coastways.	Foreign.	Total.	Ireland.	Coastways.	Foreign.	Total.	Ireland.	Coastways.	Foreign.	Total.
Wheat . . Quarters	164,215	57,041	136,103	357,359	99,585	121,409	508,343	729,337	64,137	153,104	362,904	580,145
Oats. . . ,,	295,774	35,746	17,586	349,106	292,544	16,451	25,264	334,259	273,942	9,672	45,147	328,761
Barley . . ,,	22,979	24,589	1,091	48,659	18,863	39,207	31,893	89,963	15,444	38,016	88,762	142,222
Total . .	482,968	117,376	154,780	755,124	410,992	177,067	565,500	1,153,559	353,523	200,792	496,813	1,051,128
Flour { Bags . . . Barrels, averag- ing 212 lbs. .}	336,458			..	152,185			..	56,077			..
	..			60,137	..			229,072	..			574,565

NOTE.—About three-fourths of the wheat imported Coastways is of foreign growth, having either been in bond or paid duty at some other port, previous to transhipment to Liverpool. The foreign flour is chiefly American.

Table of the Quantities, Average Prices, and Total Approximate Value of the Principal Articles of Foreign and Colonial Merchandize Imported into Liverpool, during the Year 1840.

Articles.	Quantities Imported.	Average Prices.	Approximate Value.	Rates of Duty, included in the Estimated Amount of Value.
Cotton, American . Bales	1,165,381	£9 per bale.	£10,488,429	} 2s. 11d. per cwt., or 8s. 6d. per bale.
,, Brazil . Ditto	84,564	£6.10s. ditto.	549,666	
,, East India . Ditto	109,209	£6 ditto.	655,254	
,, Egyptian . Ditto	36,425	£7 ditto.	254,975	
,, West India, &c., Ditto	20,687	£7 ditto.	144,809	
Total . Bales	1,416,266		12,093,133	
Sugar, West India . Cwts.	449,700	75s. per cwt.	1,686,375	} 24s. per cwt.
,, East India . Ditto	150,080	80s. ditto.	600,320	
,, Mauritius . Ditto	130,620	75s. ditto.	489,825	
,, Java, &c. . Ditto	12,642	85s. ditto.	53,723	
,, Havanna . Ditto	42,000	90s. ditto.	189,000	
,, Brazil . Ditto	141,150	85s. ditto.	599,887	} 63s. per cwt.
,, Foreign, &c. . Ditto	7,825	85s. ditto.	33,256	
Total . Cwts.	934,017		3,652,391	
Coffee . . . Packages	55,290	..	850,000	56s. per cwt.
Rum . . . Puncheons	8,130	14s. per gall.	433,000	9s. 4d. per pun.
Molasses . . . Casks	7,500	34s. per cwt.	140,000	9s. per cwt.
Palm Oil . . . Tons	12,270	£36 per ton.	450,000	1s. 3d. per cwt.
Olive Oil . . . Tons	3,400	£60 ditto.	204,000	{ 44s. to 210s. per ton.
Ginger . Bags, Barrels, &c.	8,195	{ £2 to £10 per cwt. }	25,000	11s. per cwt.
Dyewoods . . . Tons	24,270	{ £5 to £9 per ton. }	161,000	{ Brit. Pl. 3s. F. Pl. 4s. 6d. per ton.
Tallow . . . Casks	23,150	49s. per cwt.	560,000	3s. 2d. per cwt.
Hides . . . Number	670,900	4d. to 9d. per lb.	375,000	4s. 8d. per cwt.
Rice . . . Bags	77,800	15s. per cwt.	81,700	1s. per cwt.
Tobacco . . . Hhds.	10,750	3s. 4½d. per lb.	2,650,000	3s. per lb.
Tea . . . lbs.	4,552,820	not stated.	not stated.	
			5,929,700	
Total (excepting Tea) .	..	..	21,675,224	

Table of the Quantities of Foreign and Colonial Wheat and Wheat Flour Imported into Liverpool, with the Amount of Duty received thereupon, in the Year 1840.

	Wheat.		Wheat Flour, (chiefly American.)	
	Quantities Imported.	Amount of Duty Received.	Quantities Imported.	Amount of Duty Received.
Foreign :—	Qrs.	£.	Cwts.	£.
1st Half Year . . .	130,560	98,216	321,414	79,778
2nd ,, . . .	212,086	78,151	393,860	52,781
Total . . .	342,646	176,367	715,274	132,559
Colonial in the Year . .	3,265	743	235,868	8,101
Total. . .	345,911	177,110	951,142	140,660

No. 4.--Table of the Quantities and Value of the principal Articles of British Manufacture exported from Liverpool in each Quarter of the Year 1840.

Description.	First Quarter.		Second Quarter.		Third Quarter.		Fourth Quarter.		Total of the Year.	
	Quantities.	Value.	Quantities.	Value.	Quantities.	Value.	Quantities.	Value.	Quantities.	Value.
Copper . . . cwts.	13,526	£. 89,806	15,176	£. 75,296	20,976	£. 108,471	16,140	£. 79,489	67,818	£. 353,062
Glass . . . „	14,449	24,252	15,862	25,796	20,460	30,139	15,982	26,076	66,753	106,263
Earthenware . pieces	8,774,573	110,781	6,447,961	92,289	9,724,651	116,297	4,196,753	75,760	29,143,938	393,127
Hardware . . . cwts.	47,434	197,858	39,682	171,704	60,721	240,640	49,150	202,777	196,987	812,979
Iron . . . „	313,579	205,452	353,579	248,665	496,324	274,463	221,725	198,776	1,385,207	927,356
Soap . . . „	24,860	37,402	22,596	33,724	39,680	59,044	33,110	53,030	120,246	183,200
Manufactured woollen goods } pieces	196,884	515,065	249,884	626,420	272,197	827,702	197,452	798,953	916,417	2,768,140
Woollens un- enumerated } value	..	48,254	..	60,972	..	80,752	..	41,960	..	231,938
Tin plates . . . „	..	48,365	..	54,550	..	42,433	..	46,104	..	191,452
Manufactured cotton goods } yards	122,867,367	2,866,767	122,754,240	2,851,573	202,573,860	3,237,009	150,698,470	2,980,750	598,893,937	11,936,089
Linen goods . . . yards	11,958,839	486,329	10,346,598	418,584	11,679,560	465,082	12,743,694	508,472	46,728,691	1,878,467
Cotton twist . . . lbs.	8,702,458	439,668	7,699,327	357,816	6,982,560	347,115	7,846,428	371,916	31,230,773	1,516,515

Average Prices of Corn per Imperial Quarter, in England and Wales, with the Rate of Duty on Foreign Wheat during each week, from 2nd April to 1st October, 1841; also the Average of each Month during that period, and of the Quarters ended Lady Day, Midsummer, and Michaelmas, 1841.—
(continued from page 80.)

Date.	Wheat.						Weekly Average.									
	Weekly Average.		Aggregate Average.		Duty on Foreign.		Barley.		Oats.		Rye.		Beaus.		Peas.	
Weeks ended	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
April 2 .	64	1	63	8	23	8	33	0	21	11	34	0	39	2	39	9
9 .	64	0	63	11	23	8	32	8	23	6	35	7	39	4	38	9
16 .	63	8	64	0	22	8	32	6	23	5	36	5	39	6	38	6
23 .	63	8	63	11	23	8	32	4	23	1	35	8	39	3	37	10
30 .	63	8	63	11	23	8	31	8	23	0	35	0	38	8	38	1
May 7 .	63	2	63	8	23	8	31	7	22	11	35	10	38	7	38	3
14 .	62	5	63	5	23	8	31	2	22	7	34	8	38	5	37	9
21 .	61	6	63	0	23	8	30	9	22	8	35	3	38	2	37	5
28 .	61	6	62	8	24	8	30	9	22	4	35	7	38	4	38	0
June 4 .	62	4	62	5	24	8	29	7	22	4	35	4	38	2	38	2
11 .	62	2	62	2	24	8	30	2	22	2	32	9	37	4	39	2
18 .	62	5	62	1	24	8	30	10	21	10	36	10	38	7	38	3
25 .	63	5	62	3	24	8	31	6	21	11	35	9	38	0	37	11
July 2 .	63	11	62	7	24	8	31	11	22	1	35	6	39	3	40	11
9 .	64	3	63	1	23	8	31	9	22	2	33	5	38	3	42	4
16 .	64	11	63	6	23	8	32	6	22	4	35	2	39	5	44	8
23 .	66	3	64	2	22	8	32	9	22	9	35	5	39	6	42	4
30 .	68	3	65	2	21	8	33	11	23	1	35	7	40	3	44	1
Aug. 6 .	70	5	66	4	20	8	34	6	23	9	35	11	41	5	44	5
13 .	72	5	67	9	18	8	35	11	23	6	36	3	42	1	43	1
20 .	74	7	69	6	13	8	37	0	24	7	38	3	44	3	46	8
27 .	76	1	71	4	6	8	39	7	24	5	40	0	43	9	48	5
Sept. 3 .	74	1	72	8	2	8	39	1	24	3	40	1	44	0	45	4
10 .	71	2	73	2	1	0	39	10	23	6	39	1	44	8	44	8
17 .	64	8	72	2	2	8	39	2	23	6	37	11	44	10	47	9
24 .	63	4	70	8	10	8	39	5	22	5	38	5	45	2	45	11
Oct. 1 .	61	9	68	6	16	8	33	0	22	0	38	7	42	11	38	2
Months:—																
April . .	63	7	63	10	. .		32	5	22	11	35	4	39	2	38	7
May . .	62	1	63	2	. .		31	0	22	7	35	4	38	4	37	10
June . .	62	7	62	2	. .		30	5	22	0	35	2	38	0	38	4
July . .	65	6	63	8	. .		32	6	22	5	35	0	39	9	42	10
August .	73	4	68	8	. .		36	9	24	0	37	7	42	10	45	7
September	68	3	72	2	. .		39	4	23	5	38	10	44	4	44	1
Quarters:—																
Lady Day .	62	1	. .		. .		32	7	22	1	34	0	39	7	39	5
Midsummer	62	11	. .		. .		31	5	22	7	35	3	38	7	38	3
Michaelmas	68	3	. .		. .		35	9	23	2	37	1	42	1	44	2

An Account of the Quantities of Foreign and Colonial Wheat and Wheat-Flour Imported, Paid Duty, and Remaining in Warehouse, in each of the Months ended 5th July, August, and September, 1841.—(Continued from p. 178.)

Months ended	WHEAT.			WHEAT-FLOUR.		
	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.
	Qrs.	Qrs.	Qrs.	Cwts.	Cwts.	Cwts.
5th July .	170,549	18,342	487,770	101,227	55,498	307,466
5th Aug. .	241,189	15,455	708,948	137,704	59,425	366,675
5th Sept. .	260,430	50,791	906,030	273,450	283,776	358,930

Quarterly Average of the Weekly Liabilities and Assets of the Bank of England, in the Quarters ended 20th July, 17th August, and 14th September, 1841, and in the corresponding Quarters of the preceding Year.—(Continued from p. 178.)

Quarters ended	LIABILITIES.			ASSETS.		
	Circulation.	Deposits.	Total.	Securities.	Bullion.	Total.
1840.	£.	£.	£.	£.	£.	£.
21st July ...	16,951,000	7,578,000	24,529,000	22,865,000	4,529,000	27,394,000
18th Aug. ...	17,128,000	7,701,000	24,829,000	23,152,000	4,560,000	27,712,000
15th Sept. ..	17,263,000	7,675,000	24,938,000	23,407,000	4,453,000	27,860,000
1841.						
20th July ...	16,821,000	7,746,000	24,567,000	22,275,000	5,170,000	27,445,000
17th Aug. ...	17,228,000	7,956,000	25,184,000	23,012,000	5,106,000	28,118,000
14th Sept. ..	17,481,000	8,052,000	25,533,000	23,567,000	4,975,000	28,542,000

Aggregate Amount of Notes circulated in England and Wales by Private Banks, and by Joint-Stock Banks and their Branches, respectively, in each of the Quarters ended 27th March and 26th June, 1840-41.—(Continued from p. 178.)

Quarters ended	1840			1841		
	Private Banks.	Joint Stock Banks.	Total.	Private Banks.	Joint Stock Banks.	Total.
	£.	£.	£.	£.	£.	£.
27th March .	6,893,012	3,940,232	10,833,244	6,322,579	3,644,258	9,966,837
26th June ...	6,973,613	4,138,618	11,112,231	6,444,395	3,807,055	10,251,450

An Abstract of the Net Produce of the Revenue of Great Britain, in each of the Years and Quarters ended 5th July, 1840 and 1841.

Description.	Years ended 5th July			
	1840	1841	Increase.	Decrease.
	£.	£.	£.	£.
Customs	20,267,868	19,410,877	..	856,991
Excise	12,182,377	12,613,397	431,020	..
Stamps	6,674,624	6,706,288	31,664	..
Taxes	3,722,848	4,372,319	649,471	..
Post-Office	978,000	433,000	..	545,000
Crown Lands	162,500	147,500	..	15,000
Miscellaneous	77,751	104,180	26,429	..
Imprest and other Monies	413,211	345,681	..	67,530
Repayments of Advances.	717,686	538,983	..	178,703
Total Income	45,196,865	44,672,225	1,138,584	1,663,224

Description.	Quarters ended 5th July			
	1840	1841	Increase.	Decrease.
	£.	£.	£.	£.
Customs	5,137,934	4,848,586	..	289,348
Excise	2,711,951	2,795,312	83,361	..
Stamps	1,729,651	1,680,821	..	48,830
Taxes	1,647,808	2,030,696	382,888	..
Post-Office	100,000	119,000	19,000	..
Crown Lands	42,500	30,000	..	12,500
Miscellaneous	4,117	18,235	14,118	..
Imprest and other Monies	297,880	197,985	..	99,895
Repayments of Advances.	195,995	143,540	..	52,455
Total Income	11,867,836	11,864,175	499,367	503,028

Total Decrease on the Year, £524,640 : Total Decrease on the Quarter, £3,661.

An Abstract of the Income and Charges of the Consolidated Fund, in each of the Quarters ended 5th July, 1840 and 1841.

INCOME.			CHARGE.		
Description.	Quarters ended 5th July		Description.	Quarters ended 5th July	
	1840	1841		1840	1841
	£.	£.		£.	£.
Customs	5,137,934	4,676,712	Permanent Debt . . .	8,181,089	8,185,079
Excise	2,731,899	2,813,713	Terminable Annuities .	733,796	672,367
Stamps	1,729,651	1,680,821	Interest on Exchequer	18,329	22,822
Taxes	1,647,808	2,030,696	Bills . . . . .	..	..
Post-Office	100,000	119,000	Sinking Fund	96,845	97,122
Crown Lands	42,500	30,000	Civil List	500,420	547,396
Miscellaneous	4,117	18,235	Other Charges	111,050	192,550
Imprest and other Monies	297,880	197,985	Charge for Advances .	..	..
Repayments of Advances	195,995	143,540	Total Charge	9,701,529	9,717,336
Total	11,887,784	11,710,702	The Surplus	2,186,255	1,993,366
			Total	11,887,784	11,710,702

An Analysis of Bankruptcies in England and Wales, shewing the Counties and Trades in which the same occurred, during each Month from July to September, 1841.—(Continued from p. 180.)

COUNTIES.	July.	August.	September.	TRADES.	July.	August.	September.
Bedford . . .	1	..	..	<i>Persons connected with Manufactures.</i>			
Berks . . .	..	..	..	
Bucks . . .	1	1	..				
Cambridge . .	..	..	..	
Chester . . .	2	..	..		
Cornwall . . .	..	..	1				
Cumberland . .	..	..	..	
Derby . . .	..	..	..	
Devon . . .	3	2	1				
Dorset . . .	..	..	..	
Durham . . .	1	2	2				
Essex . . .	1	1	1				
Gloucester . .	3	7	1				
Hants . . .	5	4	..				
Hereford . . .	1	..	1				
Hertford . . .	..	1	..				
Huntingdon . .	..	..	..	
Kent . . .	1	..	1	<i>Agriculture.</i>			
Lancaster . . .	25	17	21				
Leicester . . .	2	..	1				
Lincoln . . .	..	1	..				
Middlesex . . .	25	23	11				
Monmouth . . .	..	1	2				
Norfolk . . .	..	1	..				
Northampton . .	1	..	..		
Northumberland .	..	1	2				
Nottingham . .	1	1	1				
Oxford . . .	1	2	..	<i>Other.</i>			
Rutland . . .	..	..	..	
Salop . . .	2	1	..				
Somerset . . .	1	2	2				
Stafford . . .	5	..	3				
Suffolk . . .	1	1	2				
Surrey . . .	8	5	2				
Sussex . . .	2	..	2				
Warwick . . .	2	2	..				
Westmoreland . .	1	..	..		
Wilts . . .	..	1	1				
Worcester . . .	1	3	..				
York . . .	2	11	7				
Wales . . .	4	..	..		
Total in 1841 .	103	91	65	Total in 1841 . .	103	91	65
,, 1840 .	115	104	100				

QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

JANUARY, 1842.

An Examination of some Facts obtained at the recent Enumeration of the Inhabitants of Great Britain, so far as the same have been published by the Census Commissioners. By G. R. PORTER, Esq., F.R.S., &c., Treasurer to the Statistical Society of London.

[*Read before the Statistical Society of London on Monday, 20th December, 1841.*]

SINCE the last monthly meeting of the Society, an abstract of the total population in each county of Great Britain, and in each of the islands in the British seas, according to the census taken in June last, has been printed and distributed by order of the House of Commons.

This is, beyond all question, the most important statistical document that has been published by Government since the first establishment of the Statistical Society, and it is thought desirable to call the attention of its members to some of the results which it exhibits, without waiting for the publication of more detailed returns, or for the result of the census in Ireland, both of which it may be useful to examine on some future occasion.

It will be fresh in the memory of the Fellows of this Society that its Council, deeply impressed with the importance of the work, appointed a Committee of its body early in 1839 to consider of the best mode of taking the census, and that some of the recommendations contained in the report of that committee were adopted by Parliament in the Population Act of last year. That measure, as originally introduced, aimed only at obtaining the same amount of information as was obtained in 1831, with the addition of the ages of the people, while the cumbrous machinery then employed was to have been again called into action, and doubtless with the same unsatisfactory result. It may afford matter for regret that the suggestions offered by this Society have not been more fully adopted; that accurate returns relating to health and other particulars important to a better acquaintance with the condition and requirements of society have not been obtained, as they might have been with little or no additional labour on the part of those employed as enumerators. It will, to take one instance, hardly be doubted that great advantage must have been derived from a knowledge of the number of Insane persons in the kingdom; a subject on which the most contradictory assertions have at various times been offered,

In a paper read before the Royal College of Physicians in 1810 by Dr. Powell, then Secretary to the Commissioners of Lunatics, and who might be therefore considered a competent authority, it was stated that the proportion of insane persons in this kingdom did not exceed 1 in 7,300 of the population. Ten years later, Dr. Burrows published to the world the ground for his opinion, that the proportion was 1 in 2,000; and, in 1828, Sir Andrew Halliday estimated, from data then accessible, that 1 in every 1,588 of the population was thus afflicted. In the following year, having made further inquiries into the subject, the same accomplished physician arrived at the conclusion that the proportion was 1 in 769 persons; and there are but too good grounds for believing that this increased proportion is still below the truth. We know, from Parliamentary returns, that in 1836 there were chargeable to the various parishes in England and Wales 13,667 idiots and lunatics, being 1 in 1,090 of the whole population in that year. If we knew the proportion of the population from which these cases were taken, we should still have only imperfect data for estimating the whole number of lunatics in the country, since we should then have to determine whether in any and in what degree the condition of poverty promotes the development of insanity. That it does *not* promote it, is the opinion of some celebrated physiologists who have entered upon the subject; and if we assume, what would indeed be a frightful picture of our social organisation, that the lunatics who are chargeable as paupers are furnished by one-half of the population, we must believe that nearly 1 in 500 of the people of this country are thus distressingly visited. Mr. Tuke, the treasurer of the Retreat Asylum near York, who has bestowed many years of unremitting attention upon this subject, has stated, as the result of 20 years' experience in that institution, that there is probably one insane person for every 300 among the "Society of Friends."

Is it right that a subject of so much practical importance, and where a correct knowledge of its extent is so necessary for the guidance of society in duly providing for the evil, should be thus left to conjecture or computation? The suggestions of the Census Committee of this Society, had they been fully adopted, would have set this question at rest, and would, in various other ways, have aided the investigations of science.

With all its deficiencies we may, however, congratulate ourselves upon now possessing a more correct account of our numbers than was attained by any former enumeration; and we may reasonably hope that, when Parliament shall next be called upon to legislate upon this subject, a juster sense of its importance will be entertained, so that it will not be so sparing, as it has been on the present occasion, of the labour of those who shall be intrusted with the work.

Considerable disappointment has been expressed that the rate of increase experienced in Great Britain between 1831 and 1841 has been below that exhibited between 1821 and 1831. Those rates were:—

	Between 1821 and 1831.	Between 1831 and 1841.
England	16 per Cent.	14.5 per Cent.
Wales	12 „	13 „
Scotland	13 „	11.1 „
Islands in British Seas . . .	15.8 „	19.6 „
Great Britain	15 „	14 „

A slight examination may suffice to show that this disappointment is in a great degree, if not altogether, unfounded.

It is well known that great numbers of persons are continually leaving the kingdom to settle in our colonies and in foreign lands. No accurate account of their numbers can be given. The statements furnished by the Custom-houses include only those persons who leave our shores in ships specially employed for the conveyance of emigrants, but it is well known that a large number, in the aggregate, of passengers is taken by trading vessels, and of these no account is preserved. If, therefore, we limit the inquiry to the numbers given by the Custom-houses of England and Scotland, we may be sure of being below the truth, and, thus corrected, the comparison between the two decennary periods will be as follows :—

Between 1821 and 1831.

ENGLAND AND WALES.

Population, 1821 11,978,875
Emigrated in 10 years to 1831 124,888

Population 1831 11,853,987
Population 1831 13,897,187

Increase 2,043,200
or 17.05 per Cent.

SCOTLAND.

Population, 1821 2,093,456
Emigrated in 10 years to 1831 20,969

Population 1831 2,072,487
Population 1831 2,365,114

Increase 292,627
or 13.98 per Cent.

GREAT BRITAIN.

Population 1821 14,072,331
Emigrated in 10 years to 1831 145,857

Population 1831 13,926,474
Population 1831 16,262,301

Increase 2,335,827
or 16.59 per Cent.

Between 1831 and 1841.

ENGLAND AND WALES.

Population 1831 13,897,187
Emigrated in 10 years to 1841 394,105

Population 1841 13,503,082
Population 1841 15,911,725

Increase 2,408,643
or 17.33 per Cent.

SCOTLAND.

Population 1831 2,365,114
Emigrated in 10 years to 1841 66,173

Population 1841 2,298,941
Population 1841 2,628,957

Increase 330,016
or 13.95 per Cent.

GREAT BRITAIN.

Population 1831 16,262,301
Emigrated in 10 years to 1841 460,278

Population 1841 15,802,023
Population 1841 18,540,682

Increase 2,738,659
or 16.82 per Cent.

If the same rate of increase had been experienced between 1831 and 1841 as was exhibited between 1821 and 1831, making allowance in both cases for the ascertained number of emigrants, the actual number of the inhabitants of Great Britain would not have been so great as they now are by 38,546 persons.

There is, however, an unavoidable inaccuracy in this statement, occasioned by the impossibility of determining the place of nativity of the several emigrants. All that we know on this head is, the part of the kingdom whence they depart. In the above computation, all quitting England have been considered English, and all quitting Scottish ports are reckoned as belonging to Scotland; but it is certain that many have come from Ireland to take their passage in emigrant ships sailing from Liverpool, and from other ports both in England and in Scotland. Will it be far wrong to reckon that this number is about equal to that of

other emigrants of English and Scottish birth of whom no account has been taken ?

The actual increase of population in each division of Great Britain between 1831 and 1841 has been—

England	1,904,503
Wales	105,139
Scotland	263,843
Islands in the British Seas	20,369
Persons travelling during the night of June 6, 1841	4,896
Total increase upon the numbers ascertained in 1831.	<u>2,298,750</u>

This increase has not been attained with any degree of uniformity in the different counties. The per centage rates of increase vary in England from 2·5 in Westmoreland, to 36·9 in Monmouth. In Wales, the variation is from 2·1 in Radnor to 37·0 in Glamorgan. In Scotland a still greater difference is observable: in 7 counties of that division of the kingdom there has been a positive diminution of numbers, a result which, until the present occasion, has not been found since 1811, and then only in a very trifling degree and in only two counties.* The variations on the present occasion are from a decrease of 3·9 per cent. in Argyll to an increase of 34·8 in Lanark.

The largest rate of increase has of course been experienced in counties where the greatest amount of non-agricultural industry has been employed. The returns of the late census hitherto presented do not acquaint us with the employments of the people, and for any calculations into this part of the subject we are forced to have recourse (*ad interim*) to the census of 1831; but we shall not be very far wrong in this, as the seats of manufacturing and mining industry have not undergone any notable change during the past 10 years.

Dividing the counties of England, Wales, and Scotland respectively into equal numbers, placing in one list those which in 1831 contained the largest proportionate amount of agricultural population, and in the other list those where the proportion of manufacturing, trading, and mining population was greatest, it appears that in England the increase in 21 agricultural counties (considering the three ridings of Yorkshire as distinct counties) has been, since 1831, only 8·40 per cent., while in the remaining 21 counties it has been 17·30 per cent., or more than two-fold greater than in the more agricultural counties. In Wales the disparity is yet more striking: the six most agricultural counties have increased only 5·61 per cent., while the six least agricultural have increased 18·46 per cent., or more than three-fold greater. In Scotland this disparity is even greater than in Wales: the increase in the 16 most agricultural counties has there been only 4·02 per cent., while in the remaining 16 counties there has been an increase of 15·19 per cent., or very nearly four times the rate attained in the agricultural counties.

It is not pretended that the proportionate number of births has been fewer, or of deaths greater, among the rural population than it has been among our artisans. The reverse of this is probably the case. The

	1801.	1811.	Decrease per Cent.
* Nairn	8,257	8,251	0·07
Orkney and Shetland	46,824	46,153	1·43

“preventive checks” have operated with greater force upon the town populations than upon those engaged in husbandry. Up to a comparatively recent date it could hardly be said that any prudential considerations prevented marriage among our peasantry. They had been for a long series of years accustomed to draw a large portion of their subsistence from the parish pay-table, until there had ceased to be any shame attending pauperism; and the successive births of children were so far from bringing hardship on the parents, that the increased allowance to which they were thence entitled brought with it increased ease and comfort. It was not so with other portions of our labourers. In some descriptions of manufactures it is true there has been found considerable employment for children; but until these attain the age at which the law allows of such employment they must be supported by the parents. In the one case, the birth of a child brought with it increased means of subsistence; in the other case the advantage was too remote to have any present influence, while the charge was immediate and continued increasingly burthensome for many years. The comparative rate of mortality is, as might reasonably be expected, in favour of the rural districts. It appears, from an examination of the Second Annual Report of the Registrar-general of Births, Deaths, and Marriages, that in the 21 most agricultural counties of England the mortality during the year ended 30th June, 1839, was only 1 in about 53 (52·93), while in the remaining 21 counties it was about 1 in 46 (45·86).

Under these circumstances the inferences are unavoidable that the natural rate of increase has been greatest in the most agricultural counties, and that a large proportion of their increase, failing to obtain employment and support at home, has gone to swell the numbers of the town and manufacturing populations.

If the general rate of increase had been uniform throughout the counties, and there had been no migrating from one district to another in search of subsistence, the population of the more agricultural counties in each division of the kingdom embraced in these returns would have been greater than it is

In England by. . .	247,025
In Wales by . . .	41,462
In Scotland. . .	60,512
Total . . .	<hr/> 348,999 <hr/>

and this number of persons would have been now supported in idleness, or competing for employment with the already ample numbers engaged in rural occupations.

An examination of the present in comparison with previous population returns, as respects the division into males and females, affords strong and satisfactory evidence of the substantial correctness of the present and preceding enumerations of the people. It would be absurd to suppose that there can have been any collusion among the numerous persons employed at such distant periods of time, and acting independently in every part of the kingdom, and when we see so much consistency as is exhibited in this part of the results, it is impossible to resist the evidence of their faithfulness.

The published returns do not make any distinction of sex earlier than 1821, except for England, where the returns have always distinguished

males from females. The centesimal proportions calculated from these returns are as follows:—

	1801		1811		1821		1831		1841	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
England . . .	47·86	52·14	47·97	52·03	48·69	51·31	48·71	51·29	48·82	51·18
Wales	48·85	51·15	48·94	51·06	49·11	50·89
Scotland	46·98	53·02	47·17	52·83	47·41	52·59
Great Britain	48·44	51·56	48·49	51·51	48·64	51·36
British Channel Islands.	46·62	53·38	46·81	53·19	46·42	53·58

The first thing that must strike everybody on inspecting these figures, is the uniformity of the relation which the different divisions of the kingdom have borne to each other at different periods as regards the division of the sexes. The proportion of males to females is, and has always been, greatest in Wales, and least in Scotland,—leaving out of view for the moment, the Channel Islands, where, owing to the smallness of the population, a trifling circumstance would suffice to disturb all regularity.

The smaller proportionate number of males in Scotland will be naturally ascribed to the disposition which our countrymen north of the Tweed, have ever evinced to settle in other lands in search of a greater measure of worldly success, than can be realized at home. This roving, or ambitious disposition, is more likely to prevail among men, or at any rate, is more easy of gratification among them, than among women.

Another very remarkable fact is shown by these proportionate numbers, and it is one which must very much strengthen belief in their accuracy. This is the uniformly increasing proportion of males. The natural proportion between the sexes was unavoidably disturbed by the operations of the war, which lasted, with very short intervals, from 1793 to 1815. It would necessarily require time to restore the equilibrium, and the operation to this end would as necessarily go forward with the regularity exhibited above. The disparity between males and females in each 10,000 of the population, has been:—

	England.	Wales.	Scotland.	Great Britain.
1801	428	..	..	..
1811	406	..	..	..
1821	262	230	604	312
1831	258	212	566	302
1841	236	178	518	272

The enumeration of houses has, as heretofore, been so made as to distinguish those inhabited, from those which are uninhabited, or in the course of construction. The latter distinction was not made in taking the census of 1801, and it is understood that houses which were then being built were not, except in a very few cases, included by the enumerators.

The average number of persons inhabiting each house in the different divisions of Great Britain at each period of enumeration was as follows:—

	England.	Wales.	Scotland.
1801	5.67	5.01	5.43
1811	5.68	5.12	5.93
1821	5.76	5.26	6.13
1831	5.63	5.18	6.40
1841	5.77	4.84	5.22

The uniformity in this respect in England is very remarkable. The smallest number of inhabitants to each house occurred in 1831, and the greatest number in 1841, but the difference between these periods amounts to no more than 14 persons in 100 houses. The difference, such as it is, exhibits a backward movement in the domestic comforts of the people. The proportionate numbers are of course greatest in cities, and especially in the metropolis. We find that the average number of inhabitants to each house in Middlesex, is far beyond the general average for England.

It was in 1801	. . .	7.25
1811	. . .	7.29
1821	. . .	7.48
1831	. . .	7.52
1841	. . .	7.59

These numbers exhibit, as might be expected, a gradual but progressive crowding together of the inhabitants. In proportion to the growth of cities, the ground on which they stand becomes continually of greater money value, and the very improvements which add so much to their beauty and general healthfulness by widening streets, tend to drive people closer together in various localities. There are no data from which to calculate the proportion of inhabitants to dwellings in the metropolis earlier than 1821, nor have we yet the means of doing so for the present year. The proportions in various parts of the metropolis, and in its aggregate in 1821 and 1831, were as follows :—

	1821.	1831.
London within the walls	7.07	6.97
London without the walls	7.50	7.78
City of Westminster.	9.84	9.79
The metropolis in its aggregate, including Southwark and the out-parishes in Middlesex and Surrey	7.44	7.48

The greater number observable in Westminster, may be ascribed to two opposite causes, its poverty and its wealth. The investigations of this Society into the condition of the inhabitants of some of its parishes,* have shown how closely they are herded together, and it is evident that the larger dwellings in the city, whether they are occupied for purposes of business, or are the abodes of private families, give shelter to more than the average number of human beings.

The metropolitan county and city of Scotland exhibit a greater difference with the whole of that division of the kingdom, in the proportion of houses to inhabitants, than we have seen to exist between Middlesex and London, compared with the whole of England. Such at least was the case in 1821 and 1831, and we have not the means of comparing them before nor after those periods. The proportions were :—

* See Report of a Committee of the Statistical Society of London, on the state of the Working Classes in the parishes of St. Margaret and St. John's, Westminster.—Journal, vol. iii. p 14.

	Inhabitants to each House.	
	1821.	1831.
In the County of Edinburgh . . .	10·04	11·11
In the City of Edinburgh . . .	15·09	15·90
In Scotland generally . . .	6·13	6·40

Some explanation is wanting for the right understanding of the returns just published as regards the population, and the houses, in the cities and boroughs of Scotland. The numbers for Edinburgh city are stated at 8,595 houses, with 56,336 inhabitants, or 6·55 to each house. In another part, the numbers "within the parliamentary boundary," are stated as 22,523 houses, and 133,692 inhabitants, or 5·93 to each house, proportions very greatly at variance with former enumerations, but which are probably capable of satisfactory explanation.

There is some reason to suspect inaccuracy in the return of the number of inhabited houses existing in Scotland, at the census of 1831, the proportionate increase from 1821, being then far less than was found in England and Wales, while the increase of Scotland between 1831 and 1841, was as much out of proportion greater than occurred in England and Wales. The following are the per centage rates of increase of inhabited houses in each division of Great Britain, &c., at the various dates of enumeration.

Years.	England.	Wales.	Scotland.	Great Britain.	British Islands.
1811	14·32	10·49	3·24	12·35	..
1821	16·32	14·05	12·22	15·61	..
1831	19·16	14·20	8·17	17·34	13·76
1841	18·37	21	36·26	20·83	22·36

The actual increase in the numbers at the same period was as follows :—

Years.	England.	Wales.	Scotland.	Great Britain.	British Islands.
1811	210,236	11,345	9,540	231,121	..
1821	273,867	16,785	37,381	328,033	..
1831	374,049	19,339	27,919	421,307	1,895
1841	427,273	32,674	133,964	593,911	3,501

The increase here shewn, in England and Wales, bears a fair proportion to the increase of the population, which is not the case in the numbers for Scotland. If the rate of increase between 1821 and 1831 had been the same in Scotland as it was in England, the addition would have been 65,425 houses in 1831, leaving 96,458 for the increase in 1841. A like discrepancy is observable in the same division of the kingdom in 1811. It is, of course, impossible to correct errors, if they be such, which were made so long ago, and we must content ourselves with the strong probability that from the greater precision adopted in the present year, the returns now given are substantially correct, and will afford a true comparison for the future.

A very important inquiry, viz., the number of uninhabited houses, has been made at each of the five enumerations in the present century, and the results are given in the return now under examination. It is not necessary here to state the actual numbers. The more interesting question is the per centage proportion of habitable houses which have

been found empty in each division of Great Britain, at the different enumerations, viz.,

Years.	England.	Wales.	Scotland.	Great Britain.	British Islands.
1801	3.54	3.14	3.13	3.45	..
1811	2.77	2.52	3.59	2.88	..
1821	3.27	2.61	3.57	3.27	3.01
1831	4.66	3.74	3.33	4.44	4.26
1841	5.58	5.11	4.61	5.41	4.31

It appears from these figures, that in the present year there were very nearly one fourth more houses (proportionally) empty, than were empty in 1831. Compared with other periods, the proportionate number of unoccupied dwellings is still more disadvantageous.

The per centage proportion of houses building compared with the numbers already habitable at each enumeration from 1811 to the present time, has been as follows :—

Years.	England.	Wales.	Scotland.	Great Britain.	British Islands.
1811	0.88	0.83	0.74	0.85	..
1821	0.90	0.70	0.68	0.86	0.69
1831	0.96	0.80	0.67	0.91	1.38
1841	0.88	0.89	0.52	0.83	1.09

In the foregoing calculations, the “Islands in the British Seas,” viz., Jersey, Guernsey, and its dependencies, and Man have been taken in the aggregate. Their importance when compared with the greater divisions of the kingdom, does not require that we should notice them in much detail, and the following calculations in which their individual progress is described, will probably satisfy any amount of interest that may exist concerning them.

	Jersey.		Guernsey, &c.		Man.	
Per centage increase of population:						
1831 . . .	27.9		25.4		2.2	
1841 . . .	30		9.2		17	
	M.	F.	M.	F.	M.	F.
Proportion of males and females:						
1821 . . .	45.65	54.35	45.66	54.34	47.79	52.21
1831 . . .	46.48	53.52	45.48	54.52	47.70	52.30
1841 . . .	45.45	54.55	45.40	54.60	47.98	52.02
Proportion of inhabitants to houses :						
1821 . . .	7.05		6.75		6.05	
1831 . . .	7.33		6.87		5.97	
1841 . . .	7.13		6.32		6.02	
Per centage increase of houses :						
1831 . . .	23.11		23.38		3.53	
1841 . . .	33.68		18.66		16.17	
Per centage of empty houses :						
1821 . . .	1.		3.35		4.04	
1831 . . .	2.25		5.49		4.99	
1841 . . .	3.66		5.12		4.40	
Per centage of houses building :						
1821 . . .	0.68		0.65		0.71	
1831 . . .	0.97		2.83		0.85	
1841 . . .	1.93		0.63		0.67	

That part of the returns which gives the population, and the number of houses inhabited, empty, and building, of each superintending registrar's district in the several counties of England and Wales, is not of much present use, because those districts do not correspond with any hitherto known and recognized divisions of the counties; and consequently do not afford means for comparison with former periods, but at the next and all succeeding enumerations they will afford convenient data for comparison. It is probable that in the more detailed accounts, to be hereafter published by the Census Commissioners, we shall find that the ancient parochial divisions have been adhered to, and shall thus be able to inquire as minutely as can be desired into the circumstances of every locality. The public will look with anxiety for these details, and for other important data which have come to the hands of the Commissioners, and which necessarily require time for their presentation in a form that will be generally useful.

The foregoing statements have been confined as strictly as possible to an exhibition of the facts disclosed in the parliamentary returns. This is not the place in which it would be proper to bring forward for discussion opinions to which a portion of those facts seem inevitably to lead every one desirous of drawing from those returns the full advantages which they are calculated to yield. Whether those opinions should partake most of hope or of despondency, cannot now be fitly canvassed. It may, however, be allowable to remark, that an old and already well-peopled country, which in 40 years has increased its numbers from 10,472,048 to 18,664,761, or 78 per cent., and has added 89 per cent. to the number of its habitable houses, has exhibited an amount of energy of which the world had previously offered no example. At various periods within the recollection of most of those who are here assembled, clouds have gathered over and around our land, but have given place to days yet brighter than any which had gone before. In periods of gloom, the prophet of evil is sure to raise his voice. In this favoured land he has hitherto prophesied vainly. Have we not fair grounds for reliance upon the unconquerable energy of British hearts and minds, to burst through even darker clouds than any by which we may be now surrounded?

Statement showing the per Centage Rate of Increase of Population in each County of England between 1831 and 1841; also (by computation) the Population of each County at the end of June, 1839 and 1840, respectively; the Mortality of each County during each of the Years ending 30th June, 1839 and 1840, and the proportion of Deaths to the computed Population during each of these Years.

COUNTIES.	Per Centage, increase between 1831 and 1841.	Population in June, 1839.	Deaths in Year ending 30th June, 1839.	Proportion of Deaths to Population in Year ending 30th June, 1839.	Population in June, 1840.	Deaths in Year ending 30th June, 1840.	Proportion of Deaths to Population in Year ending 30th June, 1840.
				1 in			1 in
1. Westmoreland.	2.5	56,184	1,155	48.64	56,327	1,307	43.09
2. Hereford . .	2.9	113,793	1,923	59.17	114,116	1,796	63.53
3. Cumberland . .	4.8	176,266	3,198	55.11	177,089	3,483	50.84
4. Norfolk . . .	5.7	408,108	8,136	50.15	410,364	8,009	51.23
5. Oxford	6.1	159,690	3,152	50.66	160,631	3,217	49.93
6. Suffolk	6.3	311,367	6,201	50.21	313,248	5,960	52.55
7. Buckingham .	6.4	154,097	2,746	56.11	155,043	2,978	52.06
8. Salop	7.2	235,799	4,670	50.49	237,406	4,725	50.24
9. N. R. Yorkshire	7.2	201,881	3,376	59.79	203,271	3,862	52.63
10. Devonshire . .	7.8	525,881	9,244	56.99	529,806	9,172	57.76
11. Somerset . . .	7.8	429,642	8,615	49.87	432,822	9,023	47.96
12. Wilts	8.2	256,037	4,396	58.24	258,022	4,853	53.16
13. Essex	8.6	339,498	6,606	51.39	342,246	6,421	53.30
14. Leicester . . .	9.5	212,085	4,393	48.27	213,970	5,363	39.89
15. Hertford . . .	9.6	154,458	3,013	51.26	155,848	3,155	49.39
16. Dorset	9.7	171,645	2,984	57.52	173,194	2,823	61.35
17. Rutland	10.	20,949	380	55.12	21,144	402	52.59
18. Sussex	10.	294,284	5,228	56.29	297,027	5,361	55.40
19. Berks	10.2	157,259	3,601	43.67	158,743	3,757	42.25
20. Huntingdon . .	10.3	57,598	1,039	55.43	58,148	1,284	45.28
21. Worcester . . .	10.4	229,060	6,404	39.77	231,272	6,996	33.05
22. Nottingham . .	10.8	244,884	5,128	47.74	247,328	6,945	35.61
23. Northampton .	10.9	195,116	3,971	49.13	197,088	4,155	47.43
24. Gloucester . . .	11.4	422,450	7,564	55.85	426,878	8,442	50.56
25. Northumberland	12.2	244,797	5,113	47.87	247,532	5,676	43.61
26. Hampshire . . .	12.9	346,808	6,366	54.47	350,874	6,337	55.36
27. Bedford	13.	105,446	2,143	49.20	106,691	2,428	43.94
28. Cornwall	13.4	333,203	6,205	53.69	337,236	5,760	58.54
29. Cambridge . . .	14.2	160,398	3,525	45.47	162,453	3,620	44.87
30. Lincoln	14.2	353,667	6,203	57.01	358,192	6,912	51.82
31. Kent	14.4	534,359	10,543	50.68	541,259	11,172	48.44
32. E. R. Yorkshire	14.6	226,449	4,926	45.94	229,223	5,322	43.07
33. Derby	14.7	265,195	5,078	52.02	268,698	5,658	47.48
34. Middlesex	16.	1,532,959	38,264	40.06	1,554,787	37,012	42.
35. W. R. Yorkshire	18.2	1,119,209	25,167	44.47	1,137,066	26,489	42.92
36. Chester	18.5	383,118	8,355	45.85	389,209	9,143	42.56
37. Warwick	19.4	389,019	8,184	47.53	395,570	8,691	45.51
38. Surrey	19.7	563,357	13,321	42.29	572,985	12,831	44.65
39. Stafford	24.2	490,267	9,149	53.58	500,236	9,800	51.04
40. Lancaster	24.7	1,601,022	44,830	35.71	1,634,043	51,067	31.99
41. Durham	27.7	310,204	6,560	47.28	317,241	7,382	42.97
42. Monmouth	36.9	127,106	3,100	41.00	130,728	3,422	38.20
Total .	14.5	14,614,594	314,155	{ 1 in } { 46.52 }	14,805,054	332,211	{ 1 in } { 44.56 }

Further Illustrations of the Practical Operation of the Scotch System of Management of the Poor. By W. P. ALISON, M.D., &c., Professor of the Institutes of Medicine in the University of Edinburgh.

[Read before the Statistical Society of London, 15th November, 1841.]

WITHOUT pretending to a profound knowledge of political economy, I think I can easily perceive, that the application of statistics to that science is of equally essential importance, and at the same time demands equal caution and circumspection, as its application to many medical investigations. In an inquiry into the alleged usefulness and importance of any remedy for a known disease, statistical statements extending to the treatment of a very large number of cases, give undoubtedly more positive results than the experience of any individual; but in order to give them value, various cautions are necessary; we must be certain that the terms used in describing these cases, convey exactly the same meaning, and that the statements made in regard to them, either actually embrace, or make sufficient allowance for, all the particulars by which the recovery of patients afflicted with that disease may be affected;—otherwise the collection of great masses of experience, and their exhibition, according to the “numerical method,” *i. e.* in a statistical form, may only serve to extend and perpetuate erroneous conclusions.

We know, for example, that the experience acquired of the efficacy of any one remedy, such as blood-letting, or wine, during an epidemic of any kind of fever, however accurately exhibited in the form of tables, may be wholly inapplicable to another epidemic of the same disease; because under the nosological term, epidemic fever, we necessarily include a great variety of individual cases; and experience shows that the progress of the disease, under any mode of treatment,—the part of the symptoms which becomes predominant, and the mode in which death is produced,—are all extremely different, in the majority of cases occurring in different epidemics, or even in different periods of the same. So also, we cannot apply the statistical results of the experience acquired concerning the efficacy of a remedy at one season of the year to its use at another season, when another influence materially affects the progress of the disease; we cannot apply the statistical results of the use of a remedy among soldiers or sailors, or agricultural labourers, to artisans, or to women and children inhabiting a great town; nay, we cannot trust to the numerical results of the use of a remedy in the hands of one practitioner, as sufficiently securing its subsequent useful application, unless we are certain that we understand the principles by which its use was regulated, and can make these intelligible to other practitioners, of average judgment and discernment.

Some of these difficulties, in regard to the application of statistics to medical science, may be surmounted simply by multiplying experience, and obtaining statistical details, illustrating the efficacy of each of the disturbing forces, which can be supposed to influence the results of the inquiries. But there are facts, in regard to the power of remedies over disease which can hardly be exhibited statistically, of which we can only be assured by observing the actual progress of individual cases, before and after the use of these remedies; and in order to give us the requisite confidence in the truth of these facts, “it is better to *watch* than to *count*.” Accordingly, we may observe generally, that our faith in the efficacy of all remedies is founded, partly on well considered and varied

statistical statements, but partly also, on watching the progress of individual cases to which we see them applied.

I apprehend that nearly the same observations should be applied to our judgment in regard to that great and general disease of the body politic, on which I have ventured to express opinions widely different from those which have of late years been prevalent in Scotland; and much more in accordance with those which have suggested themselves to most practical observers in England.

In order that the ground of those opinions may be clearly perceived, and that any application of statistics to this subject may be really useful, it is necessary to be precise in the use of terms, and I shall therefore state shortly in what sense I use those which are most common in these discussions.

When I speak of the management of the *poor*, I use this term as I think it is used in Scripture—not as applicable to the working classes, but to those members of the lower rank of society who are unable to work, or to maintain themselves by work, or to find work; and who, in consequence, have fallen, or are about to fall, into a state of *destitution* and *dependence* on assistance given as one form or another of *charity*. And when I use the word *destitution*, I refer to the condition of persons who have a deficient supply of the necessaries of life, whose food is scanty and precarious, who are obliged to part with bed clothes, body clothes, and furniture to procure food; who are inadequately clothed, and generally obliged, at least in towns, to associate together in masses, for the sake of fuel and shelter.

The term *pauperism*, again, is properly applied, as I conceive, only to that part of the community to which a *legal* provision is extended. The meaning of this term is therefore dependent on arbitrary conditions, and as applied to different countries where the laws and usages as to the management of the poor are very different, it may convey very different notions, and greatly mislead our judgment.

When used in a country in which a compulsory provision against destitution exists, and is *uniformly enforced*, the term pauperism becomes nearly synonymous with poverty, and even with such destitution as is there found; and in comparing the different parts of that country with another, the statistics of pauperism will afford a true index of the degree of destitution, and of suffering from that cause, existing among the people; but if we apply the same mode of inquiry to another country, in which there are no means of uniformly enforcing a legal provision against destitution, it will only tend to mislead us. In reference to such a country, all statistical evidence as to *pauperism*, is almost without value in determining the question how far *destitution* and suffering, and the various national evils thence resulting, are there controlled.

Thus when an Englishman is told that in Scotland the paupers do not average more than 4 per cent. of the population, and in some places do not constitute 1 per cent. instead of nearly 9 per cent. as in England, and that the cost of the poor as proportioned to the population, is not more than 1s. 2d. a-head in the former country, and nearly 6s. a-head in the latter, he is naturally apt to infer that the management of the poor is much better in Scotland than in England; and it was in fact by this apparently simple, but very superficial mode of judging, that the opinion lately so prevalent in England, of the superiority of the Scotch mode of

management was produced ; and if the term pauperism expressed the same thing in the two countries ; if the condition of the poor admitted to the legal provision, or of those excluded from it, were a given quantity in both, this inference would be correct ; but if the object of our inquiry is to know in which country “ the greatest happiness of the greatest number ” is best provided for, that inference is at once set aside when we find that in England the greater number of the paupers suffer none of the evils of destitution ; that on the contrary, to use the words of the secretary of the government commission, which recommended the change in the Poor Law, they are “ even in the most pauperized districts, well fed, well lodged, well clothed, happy, and independent ; ” whereas in Scotland, the legal provision being irregularly and inadequately applied, most of the paupers, and great numbers who are denied aid from the legal provision, live in abject destitution.

This becomes still more obvious, when it is remembered that in Ireland, where, until within these few years there were no paupers at all, (according to the definition of pauperism above given,) the condition of not less than 25 per cent. of the people is so miserable, that they are, more or less, dependent on charity, and “ no English pauper in his senses would exchange places,” even with many of the occupiers of the land.

To avoid the errors into which we may be thus led by the statistics of *pauperism*, it is necessary for us to take a wider range, and to study the statistics of *destitution*. We ought to trust to nothing but Experience, as teaching in what circumstances, or under what institutions, the sufferings of destitution are most intense and most permanent ; but in order to give us the full benefit of experience in a statistical form, on this subject, our inquiries should embrace all the following points :—

1. The *degree of destitution existing* under each system of management—not only the proportion of the population dependent on charitable aid, but the degree of privation and sufferings which they undergo.

2. The *extension of the population*, as proportioned to the demand for labour, on which, of course, the probability of the recurrence or permanence of the evils of destitution depends.

3. The *proportion of the population* which is dependent on assistance from the rest, whether in the form of legal assistance or voluntary charity.

4. The *expense of the provision* made, whether legally or voluntarily, for the relief of destitution, and the manner in which this burden is *distributed over the population*.

5. The effect of the system adopted on the *character and habits of the people*,—first on the feelings and conduct of the higher ranks, towards the dependent poor, and secondly, on the character and dispositions of the dependent poor themselves, particularly as to improvidence, intemperance, and immorality.

The statistical statements as to these points should, likewise, be accompanied with a general view of the condition, as to other particulars, of each country examined, especially as to the size of estates, the residence or non-residence of proprietors, the size of farms, the proportion of urban and rural population, the proportion of persons engaged in agriculture or manufactures, the extent of education, and the means of religious instruction among the people. But so far as I can learn, very considerable varieties in all these respects are found to be compatible,

either with a comfortable or a very miserable condition of the poor, according as the legal provision for their relief is, or is not, effective.

The inquiries in England, which led to the Poor Law Amendment Act, were chiefly directed to the last three of the points above indicated; because these inquiries were rendered necessary by the unfortunate error which had been committed in the administration of the Poor Law in many parts of England,—the extension of relief, without an adequate test of destitution, and generally *in aid of wages*, to able-bodied men,—*i. e.*, the payment of part of the wages of labour out of the poor-rates, and at the expense of the whole community. This system interfered in various ways with the natural demand for labour; by enabling labourers to obtain employment and live in comfort, where their services were not really required, it undoubtedly gave an unwholesome stimulus to population; and it naturally led to such an extension of the legal relief afforded, as threatened ruin to many of the rate-payers, and consequently, in the end, irremediable destitution and suffering to the paupers themselves.

But it is obvious that in a general investigation, professing to obtain statistical information, and to record the lessons of experience as to the best mode of management of the poor, the *first two* of the heads of inquiry which I have stated above,—that into the *degree of destitution* actually existing under different modes of affording relief, and that into the *extension of population*, as proportioned to the demand for labour, particularly when applied to countries in which different systems have been long in force (points to which the inquiries preceding the change of the law in England hardly adverted),—are the truly essential points, and all others are subordinate.

In the statements which I have made as to the results of the system now in force in Scotland, as compared with that existing on the one hand in England and other countries, where there is a compulsory provision against destitution, and on the other hand in Ireland and other countries, where the system of relief is entirely voluntary, I have kept these points chiefly in view. In reference to them, the simple statistical facts, that in Ireland, where no legal provision against destitution has existed for centuries, the number of the labourers has become so great, in proportion to the demand for labour, that “a man cannot earn subsistence as a day labourer,” (*Nicholls’s Three Reports on Ireland*,) and that in the Highlands of Scotland, where the Poor Laws are not acted on at all, “an excess of population exists beyond that for which the country can afford the means of subsistence, or furnish adequate employment,” (*Report of Highland Emigration Committee*, 1841,) are of more value than all other statistical details. But I have likewise endeavoured to show that the fears which are entertained by many as to the injurious effect of a compulsory provision on the proportion of the population dependant upon it, on the capital of a country, and on the character of the population, have no foundation in experience, but are pointedly contradicted by statistical facts.

It is always to be remembered, that the evils which the Poor Law Amendment Act in England was intended to correct, were evils chiefly affecting, as yet, the pecuniary interests of the higher ranks and of the industrious classes, and only threatening, as their ultimate result, to injure the lives and comforts of the poor. That these evils are

not necessarily connected with an efficient legal provision for the poor, appears from the admitted fact, that they hardly existed at all, even before that Act was passed, in the north of England; and from the distinct statement of Mr. Senior, that of many countries in which such a provision has long existed, they have been observed only in England and in the Canton of Berne, and in both resulted merely from the ill-advised practice of paying wages out of poor-rates. When such evils exist, in connection with a compulsory provision against destitution, it is obviously by statistical evidence of the gradual increase of the sums expended on the poor, and of the number of able-bodied paupers, in proportion to the resources and numbers of the population, that they can be illustrated and exposed. But in Scotland, as in Ireland and other countries, where there is no efficient legal provision, the evils which require to be ascertained and statistically exposed, are the evils of poverty and destitution themselves,—the privations and sufferings, the diseases (especially the epidemic diseases) and mortality of the people,—the accumulation of misery in particular towns or districts where such relief as is afforded may be procured,—and most of all, the extension of the population—and the degree in which it presses on the demand for labour and means of subsistence at home, and overflows into adjoining countries.

And in this case, just as in the case of medical investigations, in order to have perfectly satisfactory results, we must combine statistical inquiries with careful observation of individual facts, and shall find them mutually to elucidate each other.

The main object of the statements which I have repeatedly made on this subject, is to show that in a complex and advanced state of society, where there is no effective legal provision for the poor, it is always practically found that there is much unrelieved or imperfectly relieved destitution; that the natural effect of this is, *not prudence, but degradation*, and the natural effect of degradation is improvidence, recklessness, and thereby a morbid increase of population; so that in such a country, not only the sufferings of the poor, but ultimately *the numbers of the suffering poor*, become much greater than they have ever been found in those countries where an effective legal provision, even if injudiciously administered, exists.

This last point may be statistically ascertained; but the conclusion drawn from it is greatly strengthened by other observations, the result of which cannot so easily be exhibited in numbers. Such observations show that voluntary relief, in a complex state of society, is always deficient in the great requisites—*first, of uniformity and adequacy of amount*, as proportioned to the sufferings of those who require it, and to the resources of those who grant it; and *secondly, of security against abuse*, which can be obtained only by constant inspection of the conduct of those relieved. And again, such observations enable us to assign two reasons for the ultimately excessive population of districts where there is no effective legal provision:—1st. That in such districts nobody's pecuniary interest is directly or immediately injured by incipient redundancy of population, and therefore nobody is at pains to obstruct it in its early stage; and 2nd. That in such districts numerous families are reared in penury and degradation, without artificial wants or habits of comfort, and when they come to adult age, are very generally found to be wholly beyond the influence of any preventive checks on population.

Such observations point out, likewise, the true mode of applying statistical information to the practical question,—what restrictions, or retrenchments, on the legal relief afforded against destitution are prudent, and likely to be permanently useful, and what are excessive and injurious? The only general rule I believe to be, that all such restrictions as tend practically to *degrade the poor*, to escape which they will *lower their habits*, and bring up their families in filth and penury, however temporarily economical, will be ultimately injurious.

In a former paper I have brought forward a number of facts to prove, that while *pauperism* and the *legal cost* of the poor have been kept down in Scotland, much below what we find in England or in other countries, where an effective legal provision exists, *destitution* has made rapid progress; and the *condition* of the poor in Scotland is not only no subject of gratulation, but one of deep regret and alarm, to every one who is really at pains to study it. And I can now refer to a very considerable number of documents, made public since that paper was published, which fully confirm my statements,—*first*, as to the amount of existing destitution in Scotland, the inadequacy of the relief given, and of all other existing resources, in averting much suffering and consequent degradation from large numbers of the poor who are admitted to the legal provision; *secondly*, the number of cases, even of extreme destitution, in which all parochial relief is refused; *thirdly*, the excessive burden, of relief to the misery surrounding them, which is thus laid on the industrious classes of society; *fourthly*, the accumulation of destitution in the towns, which under a different system of management finds adequate relief in country districts; and *lastly*, the general redundancy of the population, greatest in districts where the existing Poor Laws are not enforced, and where the legal relief given is admitted to be illusory; and, in connection with this, the extension of epidemic disease.

In proof of all these points, I may refer to the *Plea of the Poor of Scotland, for an Inquiry into their Condition*, by the Rev. Dr. Burns, of Paisley; (an author who has previously written on the subject of pauperism in Scotland, and is allowed on all hands to be practically well informed in regard to it;) to the facts contained in the Rev. Mr. Lewis's *State of St. David's Parish, Dundee*; those contained in the *Remarks on the Circumstances and Claims of the Indigent Poor, and the Inadequacy of the present System of Parochial Relief in Scotland*, by Charles Scott, Esq., Session Clerk at Peterhead. I may refer to the very important *Police Return*, by Captain Miller, at Glasgow, of the circumstances of 1,038 destitute families visited by himself, and partially relieved there last winter; to the *Memorandum on certain Results arising out of the Bills of Mortality of the City of Glasgow, and which bear on the Condition and Management of the Poor*, lately published by direction of the Town Council of Glasgow; to the *Report on the Local Census of Lanarkshire*, by Alexander Watt, Esq., just published; and to the *Reports on the Sanatory Condition of various Towns in Scotland*, lately drawn up under the direction of the Poor Law Commissioners; particularly to that on Glasgow, by Mr. Baird; on Ayr, by Dr. Sym; on Dumfries, by Dr. McLellan; on Musselburgh, by Dr. Stevenson; on Lanark, by Mr. Gibson. I may refer to the proofs of extreme destitution, and enormously redundant and still increasing population, (by no means solely referable to the change of the duties on kelp, but accumu-

lating in excessive numbers on the sea coasts, where a precarious employment was to be found,) contained in the evidence taken by the Committee of the House of Commons on emigration from Scotland. But the most satisfactory proofs I can give of the truth of the above representations as to the destitution in Scotland are the facts, that *the town councils of thirteen of the principal towns in Scotland*, including Edinburgh, Glasgow, Paisley, Greenock, Ayr, Perth, Dundee, and Aberdeen, after making some inquiry into the destitute condition of their poor, and the inadequacy of the existing means for their relief, *have petitioned Government*, almost all unanimously, *for an official inquiry*, with a view to some modification and a more uniform enforcement of the law; and that *the General Assembly of the Church of Scotland*, after full and repeated discussion of the subject, adopted by a very large majority a report expressing their “*belief that the statements as to the destitution and sufferings of a large portion of the people were but too true*,”—their feeling that it could not be the duty of the church to attempt to “*throw a veil over the sufferings of the people*,” and therefore their *approbation of the proposal of an official and authoritative inquiry into the subject*.

To the same purpose, in their *Pastoral Address*, published in July, 1841, the General Assembly thus express themselves:—“The state of the poor in Scotland, *too frequently suffering under privations such as it could scarcely be conceived possible that a Christian country could tolerate, or that human nature could endure*,—exposed to the ravages of disease and the contamination of vice and temptation to crime, hard, in their circumstances, to be resisted,—is forcing itself upon the notice of the country.” They add, that although means have been partially adopted for the remedy of these social grievances, yet these have been “*so inadequate as to be matter of reproach and blame to the church and to the country*.”

I apprehend it will hardly now be denied that the system of management of the poor now in force in Scotland has been singularly unsuccessful, either in relieving them from general and intense suffering, or in teaching or enabling them to provide against such suffering by their own prudence or exertions. But as it is of essential importance to all discussions on this subject that the results of this system should be brought fairly before the public in a statistical form, I shall adduce some farther statistical facts, in addition to those contained in my previous paper,* partly taken from recent publications little known in England, and partly from documents not yet published, in illustration of the positions I have laid down.

I. As to the state of destitution and suffering among the poor who are admitted on the parish rolls, implying obviously that the resources, in aid of which the parochial allowances are granted, are very often perfectly illusory, and that those allowances are inadequate to preserve those receiving them from abject misery and degradation, I have formerly given copious illustrations in Edinburgh and other places; and shall now show that a similar or even worse state of things exists in the larger town of Glasgow, and in such smaller towns as Inverness and Peterhead.

Of the 1038 “cases of *utter destitution*, where the extent of wretchedness endured forced itself on the sympathy of all who witnessed it,” reported on by Captain Miller, at Glasgow, 406 had parochial relief

* See Journal of the Stat. Society of London, for October, 1840; vol. iii. p. 211.

(Abstract of Return, p. 18) ; but the parochial relief granted “is wholly inadequate to do more than pay the weekly rent of their miserable dwellings” (p. 19). Take, for example, the case, which all must admit to be one deserving of sympathy and assistance, the case of widows with young children. I make out from the first nine pages of this report a list of 20 widows, with, in all, 59 children under 10 years of age dependent on them, three of them having fever in their families, two others themselves ill, and two having children dying ; the whole parochial assistance given to *all these families* is 3*l.* 14*s.* per month, averaging 3*s.* 8*d.* a-month, or not quite 11*d.* a-week, to each family. Any one who has attended to the subject must know, that the earnings of these widows, each burdened, on an average, with three young helpless children, must be very scanty ; and farther, at the time when visited and in the receipt of this allowance, they appear to have been almost all out of work, and the whole weekly earnings of the 20 families are not stated at more than 6*s.* It may easily be conceived that the condition of these families as to lodging, clothing, or furniture, is stated as equally miserable as that of those who have no legal relief at all ; many are accordingly described as having no bedding, no blankets, very little clothing, and their children almost naked ; and if it be, as I maintain, a curse to a country to have numerous families reared in it without any notions of comfort, it may be judged from what I have stated whether this curse is likely to be averted by the relief here given.

Again, taking the first 23 aged and disabled women who are here recorded as receiving this parochial relief, we find that they have 4*l.* 6*s.* divided among them in a month, which amounts to rather less than 3*s.* 9*d.* a-month—*i. e.* rather less than three halfpence a-day—for each ; and the whole earnings of the 23 are stated at only 6*s.* a-week, which sum is divided among 5 of them, leaving 18 of the 23 with no ostensible income but the three halfpence a-day for lodging, food, fuel, and clothing.

It is not here stated, and indeed can often hardly be ascertained, what assistance these persons receive from relations or friends, farther than that almost all of them are stated to have no children alive ; but any one who knows the destitute inhabitants of a large town, will at once admit that in many of the cases thus taken indiscriminately, there will be no such assistance at all ; and that the miserable state of destitution as to lodging, clothing, and furniture, described in this report, is, in the case of many, the necessary and unavoidable result of their misfortunes and infirmities ; admitting, in the absence of more efficient legal relief, only of such precarious and variable alleviation as they can obtain by one form or another of mendicity.

I shall only observe as to these facts, that while the inadequate provision for the aged and disabled labourers is the part of the system most repugnant to the feelings of humanity and the precepts of Christianity, the inadequate provision for the families of widows and disabled labourers is, in a political view, still more injurious, because it poisons one of the sources of national prosperity, and leads naturally to a perpetuation of the same evils.

Mr. Scott, in his account of the pauperism at Peterhead, (a town hitherto unassessed,) gives more precise details as to all the sources of income which persons so circumstanced can command,—earnings,

parochial assistance, and the proceeds of regulated voluntary charity, and of mendicity; and these details are the more important, as I have no doubt, from what I have learned in other quarters, that he is correct in stating the facts he has collected in regard to the condition of the poor, and the sums expended for their behoof in Peterhead, as “representing, more or less accurately, the case of many among the middling or smaller towns in Scotland.”

The number of individuals supplied from the parochial funds at Peterhead is 371, rather less than five per cent. of the population, (which is about 8,000, but not comprising, as will afterwards appear, the whole of the destitute poor,) and the sum expended on paupers, from the parish funds, in 1840, was “361*l.* 2*s.* 8½*d.*, from which, deducting 20*l.* 6*s.* 9*d.* paid to strangers, and 6*l.* 11*s.* 6*d.* paid for coffins, there remains 334*l.* 4*s.* 5½*d.*,” which gives rather more than a halfpenny a-day to each individual.

The funds which the paupers can command, and in aid of which these allowances are made, are thus stated by Mr. Scott:—

	£.	s.	d.
Proceeds of the labour of the paupers.	559	9	0
Allowances received from various charitable societies	115	15	6
	<hr/>		
	£675	4	6
From this sum there has to be deducted as payment of rents (there being no poor-house)	384	3	8
	<hr/>		
Leaving	£291	0	10
	<hr/>		

which, added to the 334*l.* 4*s.* 5½*d.* furnished by the parish, gives 625*l.* 5*s.* 3½*d.*,—the whole ostensible income of 371 persons, whose average income is thus raised to 1*l.* 13*s.* 9*d.* a-year, or about one penny and ⅓ per day for each person, for the purchase of food, fuel, clothing, and all other comforts.

A considerable number of the paupers, however, follow the practice of begging, and are even licensed to do so, on Fridays only; and there are other modes of mendicity regularly practised, the whole proceeds of which Mr. Scott estimates at 500*l.* a-year, thus apparently making up the average income of the paupers to nearly 2*d.* a-day for each. But a considerable portion of this sum, from his own account, goes to persons who are dependent on charity, indeed, but not on the parochial lists; and the portion going to the paupers is, of course, very irregularly distributed, as well as expended; so that the income of many, and especially of the more deserving, of the paupers, after payment of house rent, must be much less than 2*d.* a-day, probably hardly exceeding the 1½*d.* a-day of ostensible income.

It is usually said that the allowances to paupers in Scotland are kept so low, in order to stimulate the exertions of their relatives; but it appears quite distinctly, from Mr. Scott’s statement at Peterhead,—and I am confident it will be found, on inquiry, to be very generally true, at least in the larger towns,—that in this respect the system is peculiarly unsuccessful. The cases on the roll, he says, have been individually reviewed with this view, and except in a very few instances, “the effect of attempting to enforce the claim on relatives for the support of paupers, would only be to reduce industrious individuals and families, themselves

struggling to obtain an independent livelihood, to the condition of paupers, and thus ultimately to increase the number and claims of the poor," (p. 28); which shows that the inadequacy of the provision against beggary and destitution, does not prevent the relatives of the poor, in Scotland more than in Ireland, from forming other connexions and contracting other obligations.

While such is the usual income, from all sources, without exception, of nearly five per cent. of the population, it is to be observed that the wages of labour at Peterhead are not much lower than the average in England, Mr. Scott stated to me that the wages of a labourer there are from 8s. to 10s. a-week, and those of an artisan from 12s. to 14s.; and that those artisans who are necessarily unemployed during part of the year, such as masons, have higher wages.

It appears from a report drawn up by Mr. Anderson, of Inverness, on the sanatory condition of that town, (which was submitted to the Poor Law Commissioners, but not published by them,) that the condition of the paupers there is at least as bad as at Peterhead. The allowances seldom exceed 2l., and more generally are only 1l. a-year, to each person. "But for the known charity and liberality of their poor neighbours, a little easier in circumstances than themselves, their situation would often be most deplorable. As it is, *they can only be said to exist, certainly not to enjoy any of the comforts of life*; and from the want of cleanliness in their persons and dwellings, they are very seldom visited at their own abodes by their betters." This appeared, after the strictest inquiry, to be the condition of 470 persons, who could not be excluded from the list of permanent paupers, "very many of them old domestic servants, whose wages were never sufficient to let them have a fund for their latter day's support;" and Mr. Anderson expresses an opinion that the list of permanent paupers ought to have contained at least 100 more, all "living in a state of the greatest destitution." While this is the permanent condition of nearly 600 people in a population of 16,000, *i. e.* of nearly four per cent. of the population, and a still greater number are dependent on occasional charitable assistance, it is to be observed, that "there are no causes in the trade or commerce of Inverness strongly operating to produce an undue increase of poor. There are no manufactures or special trade carried on to any considerable extent, subjecting the population to sudden impulses or occasional distress from want of employment. The lower orders consist mainly of artificers and labourers dependent on the rural prosperity of the neighbourhood and the moderate commercial traffic of the town; and it is believed that pauperism increases much more slowly in such a population than in the manufacturing districts."

I would here merely ask, Does not the *actual condition* of the aged and disabled poor in any English town, of *similar character*, where so much larger allowances have been granted for centuries, strongly contrast with that now described; and if so, what foundation is there for the assertion, which has found so much favour in Scotland, that "the more you do for the poor, the more you contribute to their increase?"

I have been favoured by Mr. D. W. Stewart, at Hillside, near Lockerby, with a valuable paper, containing a detailed statement of the circumstances of the paupers, permanent and occasional, of that much smaller town, likewise unassessed, but in which the affairs of the poor

appear to be carefully superintended,—the allowances to them, certainly much better than in most of the unassessed districts, and the assistance obtained from relatives of the poor, small as it is, certainly much more than is to be procured from that source in any of the larger towns,—where the mortality among children is so much greater, and the sense of religious or moral obligation (particularly in those brought up in abject destitution) is less effective. The state of things here described I would regard as a very favourable specimen of the working of the present system in Scotland, such a specimen as is only seen where there are humane resident heritors, and no great accumulation of poverty; yet the inadequacy of all the resources allowed to the destitute poor is very apparent.

“The village or small post town in question contains a population of between 1,400 and 1,500, the landward part of the same parish has about 800; making, in all, upwards of 2,200.

“It is situated in a district of country where the agricultural improvements of the last 60 years are said to be as great and as apparent in the altered aspect of things as in any other county in Scotland.

“The families and individuals, of which some account is to be given, received, in the course of last year, distribution of public relief from the following:—

“From the Kirk Session (nearly altogether in money) within a few shillings of	£100
From a Female Benevolent Society, in money, clothes, and coals, about	24
From a soup kitchen, maintained for four or five weeks at an expense of about	12
A distribution of meal gratuitously (from one donor) about	10
Ditto of meal, being sold at 1s. per stone, when worth 2s. 6d., from the same	12
Total	<hr/> £158 <hr/>

“Of 123 families who received aid from the above funds, there are 63 whose cases form the subject of the subjoined analysis, and they are chosen for this purpose because they are in the habit of receiving, year after year, a nearly similar amount of relief.

“*Account of 63 indigent persons receiving regular aid from the Session or Female Society, and occasionally from other funds raised by subscription in the parish.*

“Description of Persons.

“26 widows, 12 of whom have 22 children dependent on them.
 18 single (unmarried women) 2 have 3 children dependent on them.
 15 men, 3 of whom have 8 children dependent on them.
 4 orphans.

63 individuals, with 33 children dependent on them (making in all 96 regular paupers, $4\frac{1}{2}$ per cent. of the population).

“These 33 children are such as are under 12 or 13 years of age, and are resident with their poor parents; when they are above that age, and able for work, they are generally included under the other classification of such as are able to assist their parents.

“The respective ages of the 63 are as follows:—

“	7	between 80 and 90.
12	,,	70 and 80.
21	,,	60 and 70.
9	,,	50 and 60.
3	,,	40 and 50.
1	,,	30 and 40.
1	,,	20 and 30.
1	,,	15 and 20.

“Their ability to work is also thus analysed:—

- “30 quite unable for work, from old age, infirmity, or disease.
- 21 able for a little work, spinning, knitting, breaking stones, &c.
- 12 able for work.

“Of the 21 who are marked as able for a little work, it would be difficult to make any accurate estimate of their earnings, as there has to be taken into account, not only their partial inability for exertion, from old age or infirmity, but also the inadequate and irregular supply of that species of labour to which they are necessarily confined. Taking these circumstances into account, and calculating from some individual cases of old women who get a little spinning and knitting, it is supposed that the 14 women thus classified above may not average above 6*d.* or 8*d.* a-week, or 25*s.* to 30*s.* in the year each.

“Seven widows and five single women are marked above as able for work. The seven widows and two of the single women have young children, generally more than one, dependent on them; the remaining three single women are idle from some temporary cause.

“*Assistance from Relatives.*

- “18 widows . . . Receive some assistance,—5 from one daughter alone; 4 from one son alone; 1 from a grandson; 1 from a sister, a farmer’s wife; 1 from a brother, a farmer; 6 from two or three sons and daughters.
- 8 ditto . . . Get no assistance.
- 5 single women . . . Receive assistance,—3 from children, 2 from other relatives.
- 13 ditto . . . Receive none.
- 7 men . . . Receive assistance,—4 from one daughter alone, 2 from one son alone, and 1 from two children.
- 7 ditto . . . Receive no assistance.

“In all (11 from one daughter each, 7 from one son each, 7 from more than 2 children, 5 from other relatives), 30 assisted and 29 unassisted.

“Among those who are unassisted, 2 or 3 only are marked as having children, able, but refusing to give any aid to their parents. The amount of assistance which the 30 receive is not great; a consideration of the common earnings of a workwoman, as stated above, will show her inability, even in the best case, to provide for an aged parent, and undoubtedly it is only by great self-denial they are enabled to do so; when hired at service their wages do not average above from 4*l.* to 5*l.* a-year, and yet they almost universally pay house-rent for their aged or disabled parents. It is scarcely possible for them to do more, for, as servants, they must keep themselves decently clothed. In many of the above cases, however, they will be found to be even worse circumstanced than in service; for either from not being hired, or in order to wait personally on their parent, they remain at home with them, and are thus reduced to a very scanty income from field-work, &c., probably not more than 5*l.* or 6*l.* a-year. The assistance received from sons is not so certain, nor is it

so liberal in proportion to their means, as that from daughters; paying the house-rent is, in several cases, the extent of this assistance.

“Annual Allowances.

- “1 of them receives between 7*l.* and 8*l.* This is a man quite disabled, with a wife and 5 young children, without assistance from relatives.
- 1 between 4*l.* and 5*l.* A woman, with a young child, quite disabled and without assistance from relatives.
- 9 between 3*l.* and 4*l.* 5 of these are quite disabled, 2 able for a very little, and 2 able for work; but 1 with 2 young children, the other with 4 young children. Both of these latter are without assistance from relatives; 5 of the others get some small assistance.
- 10 between 2*l.* and 3*l.* 6 of whom are quite disabled, and 4 able only for a little; 6 of the 10 are assisted a little by their relatives.
- 16 between 1*l.* and 2*l.* } Of these 38, 10 are quite disabled,
And 22 between 4*s.* and 1*l.* } 14 are able for a little only, 7 have received for temporary illness only, 7 are women, able, but with young children; 15 get a little assistance from members of their family, 23 get none.
- 4 between 5*l.* and 6*l.* These are orphans, boarded by the Session at about 2*s.* a-week.

“About three-fourths of these allowances are from the Session, the other one-fourth from other sources. In order the better to appreciate the inadequacy of such allowances, (individual cases of which, as examples, will be afterwards adverted to,) I have endeavoured to make some approximation to a fair statement of the annual necessary expenditure of a labouring man and his family.”

Mr. Stewart then enters into a circumstantial detail of the average expenditure of a labourer and his family, which he recapitulates as follows, taking two rates of greater and less comfort :—first, considering him singly—

	Average of the higher Rate.			Average of the lower Rate.		
	per Annum.			per Annum.		
	£.	s.	d.	£.	s.	d.
“House rent	1	15	0	1	5	0
Food	4	15	0	3	18	0
Fuel	1	14	8	1	6	0
Clothes	2	10	0	2	0	0
Various items	0	15	0	0	8	0
	11	9	8	8	17	0

“In a woman’s expense deduct the following :—

	£.	s.	d.			
“ Less for food	1	14	8			
Clothes	0	15	0			
	<hr/>			2	9	8
						2 9 8
				<hr/>		<hr/>
				9	0	0
				<hr/>		<hr/>
						6 7 4

“In the case of families, we have to make the following proportionate additions, supposing the family to consist of a man, his wife, and three young children :—

	Higher Rate.			Lower Rate.		
	£.	s.	d.	£.	s.	d.
"For the man as above	11	9	8	8	17	0
Food and clothing for wife at same rate	4	15	0	3	9	0
Ditto for children	9	8	0	6	4	0
Additional house rent	0	15	0	0	15	0
Ditto fuel and other items	1	15	0	0	15	0
	<hr/>			<hr/>		
	28	2	8	20	0	0
	<hr/>			<hr/>		

"My view in estimating this standard of living is, of course, to compare its expense with the allowances to the destitute, which are customary here and through the greater part of Scotland.

"To recur to the case of the single man and of the single woman—of the latter of whom, either widows or unmarried, a great portion of our poor consist,—we find that in the lower standard of living the various articles of weekly expense will, for the man, amount to 3*s.* 5*d.*, for the woman to 2*s.* 5*d.*; or, by the year, to 8*l.* 17*s.* and 6*l.* 7*s.* 4*d.* respectively.

"Thus, then, it appears that to meet an expenditure of 2*s.* 5*d.* a-week, which would no more than suffice to keep them in a manner of living customary among the lower class of the working population, such destitute women, *without ability to work and without assistance from relatives*, are in the habit of receiving from public resources no more than one half of that amount, or about 1*s.* 2*d.* or 1*s.* 3*d.* per week.

"A second class of destitute women are such as are quite disabled from work, but who get a little assistance from sons, or more frequently from daughters, in circumstances which were before described; it was there stated that the average amount of that assistance might be equal to, or little more than equal to, the payment of the house rent, viz., 25*s.* or 30*s.* a-year. The proportionate public allowances to this class, as compared with the first, would show that the same view is entertained of the amount of that assistance by the distributors of public relief; for, while the first class receive on an average about 1*s.* 3*d.* a-week, this second class have only on an average 9*d.* or 10*d.*, or about 25*s.* a-year less than the first.

"The same remark is applicable to a third class, viz., that of single women, (or widows without children,) who are able for a very little work, but who have no assistance from relatives. This class on an average receive from 8*d.* to 9*d.* a-week, agreeing with the supposition that their average earnings may not exceed 30*s.* a-year.

"The cases of destitute old men are comparatively few; the allowances appear to be proportionately small.

"Now the next question that arises is, what is the effect of making these allowances so small? What is the effect in the case of the utterly destitute old woman, of giving her a weekly provision of only 1*s.* 3*d.* a-week, while an estimate of 2*s.* 5*d.* would appear barely sufficient to afford her a living of the most ordinary standard of comfort? How will she curtail her expenditure down to this measure? It is evident that it can only be done by her being subjected to the pressure of the most meagre and pinching penury. Food, fuel, and clothing must all be reduced in the most miserable proportions; we have only to look at what we are supposing her to be reduced from: 2*s.* 5*d.* gives a habitation of the humblest order (at 25*s.* a-year, or 6*d.* a-week)—*this*

item of her expense cannot be reduced; it gives (at 10*d.* a-week) a sufficiency of only the most *homely* food, porridge and potatoes, the larger portion being of the latter as the cheapest, with a little milk added. At 25*s.* a-year or 6*d.* a-week, it supplies clothes of the most ordinary texture, no more than sufficient for warmth and such decency of appearance as may induce to attendance at church; it gives fuel at 6*d.* a-week on an average through the year, no more than enough to keep a fire burning constantly only in winter; and for what, then, will *half* of this weekly expense suffice? and in what condition in reality are these poor pensioners found?

“It is true that the hand of private charity does occasionally interfere; but this may be at a point of destitution even worse than this; and that such cases must frequently occur is too manifest.

“Not unfrequently both the fire and the clothes are worn to so low an ebb, that the poor tenant of a cheerless hovel has betaken herself to bed while yet day, to amass around her the insufficient body-clothes and single worn blanket, as some defence against the cold.

“Private relief is chiefly administered in such exigencies, and *often coming only from near neighbours who have but a bare sufficiency for themselves*, it is only very limited in amount, and such as will merely meet the most pressing wants. Many of these paupers are not addicted to any species of begging, taking this chance of being thus noticed and relieved by neighbours in any extreme exigency. Others are less scrupulous and make various applications in the neighbourhood; and something of relief is undoubtedly gained by both in either of these ways, but, being given only in relief of pressing want, it does not amount to very much in all: I should say 2*d.* or 3*d.* a-week might be a near approach to the value of such relief on an average.

“There are seasons when begging is much more urgent and prevalent, and when the amount of relief obtained in this way may be greater: there are seasons of scarcity and high prices; but it is to be observed, that to such the above estimates are not applicable, they being calculated on the average prices. But, during the last three years meal has been one-fourth higher, and potatoes no less than double the usual price. There has been no augmentation of the Session’s allowances, but, from public subscriptions and other sources, an additional aid in soup, or meal, or coals, of the value of from 6*s.* to 8*s.* in the year, has been given to each of the poor. This cannot have been adequate to meet the increased price of provisions, and the urgency of their applications to individuals has been, therefore, greater than usual.”

I hope I may be excused for adding here a few sentences from the general reflections with which Mr. Stewart concludes his Analysis of the Pauperism of his neighbourhood.

“The remark may here be made,—that too much being left for private charity to do, is in itself a cause of its non-efficiency in endeavouring to confer upon the poor anything but the mere means of subsistence, a mode of subsistence which seems a disgrace to a Christian country.

“Public charity does not fulfil its office; it leaves many crying for bread, and it drags down private charity along with it; the pitch of its philanthropy is also lowered, for the standard of all such sentiments is immeasurably influenced by habit.

“ There have been some nations, not in the infancy of civilization, who have been so blinded by degraded notions of expediency, that they had the practice of putting the old people among them to death, that they might be no longer a burden on their relatives or on society ; thus have they submitted the surer instincts of affection and humanity to some false prejudices of reason ; and habit would so confirm this usage, that the feelings would no longer be shocked.

“ Now, however custom may have prejudiced us, and the naming of religion itself often may have appeared to us to sanctify most of our institutions, is it a far-fetched analogy to pass from the usage above referred to, to our own practice in the treatment of the poor, wherein we grudgingly dole out to those who are cast helpless on society, through old age or infirmity, an allowance adequate only to the most miserable subsistence ?”

It will be observed, that the average allowance to each regular pauper in the parish to which this account applies, and where the relief given appears, on examination, so inadequate, is not less than 1*l.* 5*s.* per annum ; and it will be remembered, that throughout the whole four northern Synods of Scotland, the average allowance granted is only 9*s.* 4*d.* per annum, *i. e.* hardly more than one-third of that now considered ; and that in several parishes in the north, the *highest* amount given is stated in the Report to the General Assembly in 1839, at 6*s.*, or even at 4*s.* per annum. Indeed, the allowances to aged and disabled persons stated by Mr. Stewart are somewhat above those now granted to such paupers in the city of Edinburgh ; which have been very generally *lowered* since the time when the answers to queries which I brought forward in my paper last year, were obtained ; and now hardly do more than, as stated by Captain Miller at Glasgow, pay the house-rents of those who receive them.

The consequence of this is, that while police regulations exist, and are sometimes strictly enforced against public begging, these regulations are practically found, as Mr. Sadler expresses it, “ infinitely too cruel to be generally effective,” their most certain effect being only to add fraud to begging. The following quotation from the Report of the House of Refuge in Edinburgh for the present year, illustrates this point :—“ The number of beggars in Edinburgh is frequently brought forward as a proof of inefficiency on the part of the House of Refuge. But, by its rules, it cannot afford an asylum to persons whose parochial claims are acknowledged,” (*i. e.* unless they are sent in as boarders, paid for by their parishes). “ Very many of these are beggars, driven by absolute necessity to break the law. The parochial aid which these poor creatures receive is so inadequate to maintain existence, that, in the too frequent absence of employment, they *must* beg. How can a poor widow, with three or four small children, provide food, fuel, clothing, and lodging, on eighteen pence or possibly twenty-one pence per week ? It is matter of necessity. They must beg or starve. With such cases (*and they form a large class*) the House of Refuge cannot alas ! interfere,” further than occasionally and to a very limited extent.—(Report for 1841, p. 18.)

It has been recently stated, by defenders of the present system in Scotland, that the alleged disparity between the allowances granted to paupers in England and Scotland “*almost disappears on examination ;*”

and I have, therefore, been anxious to produce authentic documents, from which those who are accustomed to the English out-door allowances and the other resources of English paupers, can judge how far this assertion is well-founded.

II. But I have repeatedly stated, that we shall have very imperfect notions of the sufferings of the poor in Scotland, if we confine our views to the cases of those who are admitted to parochial assistance; and I must add here some details as to the cases of persons in utter destitution, who receive no relief at all from any parochial funds; the main cause of their exclusion being, as I believe, that peculiarity in the present law, by which no appeal is allowed, from the decisions of the Kirk Sessions and Managers of the Poor, to any attainable Court of Review.

Of the 1038 cases of destitution in Glasgow, reported on by Captain Miller, I have already said that only 406 had parochial relief; but it is distinctly stated that no less than 1016 had a legal settlement there. Thus it appears that 610 persons, many of them heads of families, domiciled in Glasgow and in utter "destitution, exciting the sympathy of all who witnessed it," are excluded from any parochial relief. As a specimen of the condition of those persons, in the two first pages of his Report I find the names of 22 widows of this class, with 42 children under 10 years of age; and the whole weekly earnings of these widows, forming the only ostensible income of 64 persons, are stated at 1*l.* 7*s.* not fifteen-pence a-week to each family, and not five-pence a-week to each individual, from which the whole necessities of life (including lodging) are to be provided.

Of the great *excess* of the destitution and suffering in Scotland, over the pauperism that appears on the rolls of the parishes, I formerly gave some statistical illustrations, and all the documents I have since met with, forcibly illustrate the same point. Thus, Mr. Stewart states that at Lockerby:—

"Besides the list of 63 families analysed above, there is another list of 60 families who in the same year had oatmeal sold or given to them at the rate of 1*s.* per stone, when the current price was 2*s.* 4*d.* per stone, (of 14 lbs.) This was from the same donor, and at the same time with the gratuitous distribution of meal to the session poor; and as this latter list included only such as were not in the habit of receiving any charitable assistance, it was thought better, as less interfering with a feeling of independence, to offer them so much at this low price, rather than to give them a smaller quantity gratuitously." "The principle on which it was bestowed, was the conviction that these families were suffering more or less from *destitution*. That this destitution in most of the cases must have been *very grievous* as compared with the ordinary standard of the common labourer's state of comfort, was too obvious, from the circumstances of the season as well as of the individual cases. They were all families who in the best seasons could be but scantily provided; some of them partially disabled by old age or infirmity; some of them tradesmen, at all times in very limited employment, partly from being superseded by later, better trained, and more expert hands; a few of them suffering from habits of intemperance; the greater portion of them with young families, and a considerable number with one or more of a family a little imbecile or invalids. While in ordinary times it is quite certain that such families can be supported only in a

very scanty manner, it is evident that often, whether from individual misfortune, or from general dearth and want of work, having had at no time any superfluity of the means of subsistence, but on the contrary a continual scantiness,—they must be brought within the savage domain of actual *want*.”

“ From the state of the funds at Peterhead,” says Mr. Scott, “ parties applying for assistance are now seldom relieved, until their necessities are such, that they must be admitted as regular pensioners.” “ It may easily be shown that many families and individuals requiring public or private aid for procuring the first necessities of life, receive *no aid from the funds under the management of the Kirk Session*.” (Remarks, &c., p. 25.) And to the same purpose, Mr. Anderson states at Inverness, that “ the inadequacy of the pittances granted by the Kirk Session has called forth at different times various benevolent schemes, such as a public soup kitchen, and a Ladies’ District Visiting Society, but that none of these excellent institutions dependent on voluntary contributions, have (with the exception of the dispensary) maintained a footing for more than a few years, or been able to supply the exigencies of an increasing pauper population. The Ladies’ District Visiting Society gave relief for about three years to from 800 to 1000 poor persons in the town of Inverness alone, exclusive of the land-ward part of the parish, and at times had 1200 on their list,” out of a population, with town and parish, of about 16,000 ; although the regular paupers (who, as Mr. Anderson thinks, ought to be nearly 600) have been hitherto kept under 500.

I formerly illustrated at some length the connection of extensive destitution in large towns with contagious fever, not by any means as its sole cause, but as one which favours its extension so powerfully, that its presence may always be suspected when fever is found peculiarly and repeatedly prevalent. Some farther illustrations on this subject contributed from various towns, are contained in the Appendix to the Second Report of the Association for Enquiry into Pauperism in Scotland ; and as the principle which I have stated has not been disputed by any medical authority, I need not enter again on the evidence of it, but shall add some Tables illustrating the extent to which fever has lately prevailed, and still prevails, in the great towns of Scotland, contrasting remarkably with the amount of fever in the English towns, where the provision against destitution is so much more effective.

In the year 1838, fever prevailed in England much more extensively than in any previous or succeeding year during the present century ; and I formerly gave reasons for thinking that the number of cases reported as typhus in the English registers of mortality, is somewhat above the reality. The proportion of deaths from fever to the whole mortality in that year in the following towns, appears from the Reports of the Registrar-General to have been as follows :—

In London	7·7 per cent.
,, Manchester	7·7 „
,, Liverpool	6·9 „
,, Birmingham	5 „
,, Leeds	3·6 „

(*Second Report of Registrar General in England.*)

But in Glasgow the mortality from fever, on *an average of seven years*, ending in 1840, is of the whole mortality, 11·8 per cent.

The deaths from fever are stated in the Glasgow Mortality Bills for 1840 at 1,229, being an increase of 690 *over* 1839. Dr. Cowan, to whom I am indebted for the above table, adds, "It is impossible to ascertain the precise rate of mortality from fever in 1840. It was greater than in 1839, when I assumed it at 1 in 15. Take it at 1 in 12, and the total number affected with fever in Glasgow in 1840 will amount to 14,748." And this, it will be observed, was only the third year after the great epidemic of 1837, which affected probably above 25,000 people, and caused 2,180 deaths.

The number of patients in fever admitted into the Royal Infirmary, Edinburgh, during each of the last 9 months, is as follows; and I have added a column of comparison with the average of the 9 preceding years, which was stated in my former paper.

	Admissions.	Deaths.	Average Admissions, (9 Years.)
1840. October . . .	65	8	98·6
November . . .	93	9	121·1
December . . .	135	22	130·6
1841. January . . .	161	24	129·5
February . . .	154	20	90·
March . . .	124	15	93·8
April . . .	107	11	77·8
May . . .	114	20	87·2
June . . .	110	14	79·2

Many of the patients in fever admitted into the infirmary in Edinburgh were in a very destitute state, but in no instance was any part of the cost of their maintenance defrayed by their parishes; and I believe it has scarcely ever happened that the maintenance of their families during their residence in hospital, has been at the expense of parishes.

In Glasgow the burden thus laid on the subscribers to the fever hospital ultimately became intolerable. "During the first 9 months of 1840," says Dr. Cowan, "1850 patients affected with fever had been sent into the fever hospital by the authorities of the city, barony, parish, and parish of Gorbals, beyond their purchased right, transferring the burden of treatment and maintenance from the poor rates to the voluntary subscribers to the hospital. Since the 1st of October, no patients were admitted, recommended by these parties, unless 15s. were paid for each from the poor's rates or police funds. This regulation must have had an effect in diminishing the number admitted into the hospital."

These facts show how small a portion, even of that destitution which is connected with contagious fever, has yet been admitted to the benefits of the parochial funds in Scotland, and therefore how fallacious any details as to *pauperism* must be, in enabling us to judge of the *extent of suffering* among the people.

In Dundee, on the other hand, I am happy to perceive, by a Report with which I have been favoured by Dr. Arrot, physician to the Royal Infirmary there, that fever has been less prevalent during the last twelvemonth, than for eight years past, the whole number of fever patients admitted there during that time having been only 183, whereas in the year ending 31st May, 1840, it was 575. It is also satisfactory to observe from this Report at Dundee, that "the abuse of spirituous liquors, at once the cause and consequence of destitution, is now less prevalent than formerly." And although various causes have no doubt contributed to the improvement observed in both these respects, yet I cannot help expressing the satisfaction I feel at observing that this im-

provement has been coincident, *first* with an avowal of the principle, that a small number “ of sick is an indication of comfort, and a large number an equally sure indication of want and misery among the lower classes,”* and *secondly* with a practical recognition of the truth, which I confidently maintain must be admitted and acted upon before there can be any material amelioration of the condition of the poor in Scotland; that the funds legally applicable for their relief must be very considerably increased, and their application more carefully regulated. For at the last annual meeting of the Heritors and Kirk Session of Dundee, for imposing an assessment for the poor, the managers of the poor demanded an assessment exceeding that of the former year by 25 per cent; and the meeting were so convinced of the propriety of the demand, that they voted an assessment of 500*l.* beyond what had been asked, at the same time very judiciously directing that two additional relieving officers should be appointed, in order that the additional provision made for the poor should be accompanied by a more effectual inspection of their habits and conduct.

I formerly stated, that we must wait till the present year, in order to have accurate information as to the mortality in the great towns in Scotland; but that I believed the mortality in Edinburgh for 1837 and 1838, as compared with the census of 1831, viz. 1 in 25·7, and 1 in 30·2, to be nearer the truth than that similarly obtained in any of the English towns, with which the tables of the Registrar-general enabled us to compare it, because I believed the population in Edinburgh to have made less progress since that time. This conjecture is fully borne out by the census of 1841, which shows, that between 1831 and 1841, the population of Edinburgh, including the West Church and Canongate, had only increased from 136,280 to 137,172: and therefore that the 5,300 deaths in 1837, and 4,512 in 1838, must have constituted a mortality of about 1 in 25·8 in the former year, and 1 in 30·3 in the latter. This makes it, as I think, quite certain, that in the ancient and extended royalty, where the elements of mortality are certainly greater than in the West Church and Canongate, the mortality in 1837 must have been as high as I formerly stated it, viz. 1 in 24.

According to a statement with which I have been favoured by Mr. Rawson, of the official returns of the census of 1841, in London, Manchester, and Liverpool, it appears that the increase of the population in these towns since 1831, has been 17·5 per cent., 30 per cent., and 42 per cent., respectively; and supposing this increase to have gone on uniformly during the intervening years, the true mortality in these towns in the years to which I have referred, will have been as follows:—

London . .	1837-8 .	1 in 32·8
	1838-9 .	1 in 38·2
Manchester.	1837-8 .	1 in 33·3
	1838-9 .	1 in 30·9
Liverpool .	1837-8 .	1 in 30·2
	1838-9 .	1 in 32·4

The mortality of 1837 in Edinburgh thus appears to have exceeded the highest mortality of any year in London, by 21 per cent., in Manchester by above 16 per cent., and in Liverpool by 14 per cent. The excess over the mortality of Birmingham and Leeds is still greater. The mortality in Edinburgh may be here a little overstated in conse-

* Report of Dundee Royal Infirmary, 1841, p. 2.

quence of the population of the castle and of a part of the parish of South Leith adjoining Edinburgh, not having been included in the census of the population; but, making allowance for this, the mortality of 1837 will still be very nearly 1 in 26.

In regard to Glasgow we have accurate information, from the calculations of Mr. Watt, founded on the census of 1841.—(See Report on the Local Census of Lanarkshire, p. 9.) From these it appears,

1. That the average annual number of deaths in the whole town and suburbs (excluding still-born and premature births) in the five years ending 1840 was 1 in 30·41.

2. That in 1837 the mortality was 1 in 24·05.

3. That the annual average mortality in the five years ending 1840, as compared with the population of 1841, was 1 in 33·59, or 2·97 per cent.

4. That the annual average mortality in the five years ending 1830, as compared with the population of 1831, was 1 in 41·74, or 2·39 per cent.; showing an increase of the mortality of the city and suburbs from 2·39 to 2·97, or almost exactly 25 per cent. This result, it will be observed, extends to two periods of five years each, and to more than one-tenth of the population of Scotland.

The immediate causes of this greatly increased mortality are generally allowed to be two—the increased crowding of the town, and the prevalence of epidemic fever. From a Report on the late census, made to the Lord Provost by Mr. Strang, chamberlain of Glasgow, (19th July, 1841,) it appears that in the most densely peopled part of the town (Blackfriar's parish) the population since 1831 has increased 40 per cent., while the number of inhabited houses has not increased at all; and again, in the Gorbals, “there is an increase in the population of 20 per cent. since 1831, though no new buildings have been erected, and where the great majority of the houses are of the smallest class.”—(Watt's Report, p. 11.)

Again, “the mortality from epidemic fever during the whole five years ending 1840 was nearly 12 per cent. of the whole mortality; in 1837 it was 20 per cent.; and in 1840 nearly 14 per cent.”—(Id. p. 11.)

Now for this crowding of the population in the most unhealthy part of Glasgow, and for the extension of epidemic fever among them, according to the statement of one of the most experienced and intelligent observers, (the late Dr. Cowan,) there is one simple cause, infinitely outweighing all others, viz. *destitution*: “The poorest people have no choice of a locality; their state of destitution ties them firmly to one, and the increasing amount of destitution is annually adding to the density of the population in the most densely peopled districts.”—(Journal of the Statistical Society of London, vol. iii. p. 288.) And again; “The prevalence of epidemic diseases depends on various causes, but the most influential of all is poverty and destitution. In every one of the epidemic fevers which have ravaged Glasgow, the progress has been slow, unless extreme destitution has existed.”—(Id. p. id.)

From the result of the census, and from the bills of mortality in Dundee, with which I have been favoured by Dr. Davidson, it appears that the population there increased from 45,355 in 1831, to 64,232 in 1841; the difference being 18,887, or an increase at the rate of 1,887 per annum. Supposing this increase to have gone on uniformly, the

population in 1836 would be 54,790, and, in 1837, 56,677; and the number of deaths were in 1836, 1,923; and in 1837, 1,963: showing a mortality of 27·4 in the former, and 28·8 in the latter of these two years, being those when the epidemic fever was the most prevalent there; a mortality, I believe, greatly above that which has lately occurred in any English town of the same population. It is to be remembered that these numbers, both as to Glasgow and Dundee, relate to towns rapidly increasing in numbers by *immigration*, *i. e.* by the accession of fresh inhabitants, most of whom come in the vigour of life, or at a time of life when the mortality among them is small; a fact which always makes the unhealthiness of rapidly increasing communities appear from the bills of mortality to be less than it really is.

I believe the opinion generally prevalent hitherto in England as to the Scotch system of management of the poor, has been that it is an important experiment, as showing *how much comfort* may be secured to the poor with very little assistance from the rich; but I apprehend that any one who examines the details that have now been produced on the subject, must admit that its practical result is better described by styling it an experiment to prove, how little of comfort or enjoyment is compatible with the preservation of human life; and what are the results to the body politic, to be expected from a large proportion of the people living habitually under such privations.

But I am anxious to demonstrate a little farther, the great excess of destitution over pauperism in Scotland; and this I can do in reference to the suburbs of Glasgow from the schedules of the enumerators employed in the recent census, who undertook, under the able direction of Mr. Watt, to mark all the cases of obvious destitution which came under their observation, distinguishing those who had, from those who had not, parochial relief. The numbers of destitute persons, or heads of families in these districts were as follows:—

Calton.

Paupers.		Destitute without Parochial Relief.
Males . .	48	120
Females . .	132	130
Total . .	180	250

Bridgeton.

Paupers.		Destitute without Parochial Relief.
Males . .	11	19
Females . .	39	64
Total . .	50	83

Other Suburbs of Glasgow.

Paupers.		Destitute without Parochial Relief.
Males . .	68	89
Females . .	165	271
Total . .	233	360

See Report of the Local Census of Lanarkshire, by Alexander Watt, Esq., Table VII. p. 13.

In Edinburgh some similar information was obtained at the time of

the census, but not of sufficient extent to be of much value. I have, however, prevailed on several gentlemen, particularly Mr. Tait, Surgeon and Commissioner of Police, and the Rev. Mr. Craigie, missionary, to examine and record the cases of destitution observed in several districts of the town; and I can state from the returns received from these gentlemen, and from some of the enumerators of the census, and from cases which have come under my own repeated observation, the following particulars as to 333 cases of obvious destitution, taken indiscriminately in different parts of the town, all visited at home, excluding persons living professedly by immoral practices.

Paupers, Individuals, or
Heads of Families.

121

Destitute Persons or Families
without Parochial Relief.

212*

The highest relief given to any of the paupers is 2*s.* 6*d.* a-week, and this in the case of a woman nearly blind, with four young children, The ordinary rate to a woman with three young children is 1*s.* 6*d.* a-week. A widow with one child, although at the breast, receives nothing; many aged and disabled women receive only 9*d.* a-week.

Of those receiving no parochial relief, 56 are persons out of employment, 86 are persons disabled for work, by age or disease, 38 are widows with young families; and 32 are women with families, deserted by their husbands; whereas among all the paupers of the Edinburgh Charity workhouse (1,386) there are only 5 recorded as "deserted." I would call particular attention to this last fact, as confirming the statement I formerly made, that the greater number of those who desert their families in Scotland, do so in the knowledge that they leave them to beggary, and can have no expectation of their being made paupers.

Of the 333 destitute persons, 288 can read, and many of them have received a good education.

The next point to which I would direct attention, as a natural consequence of the absence or inefficiency of any legal provision against destitution, is the amount of burden which is thus thrown on the lower and middling ranks of society, and its effect as a direct *tax upon industry*. This is a point which obviously admits of statistical proof, and demands the more attention, as the injurious effect of assessments on the industrious part of the community, has been the theme of much declamation. But if it be true, that population makes most rapid progress where there is no effective provision against destitution,—and if it be true also, that in such a country the relief of destitution (never altogether withheld) is afforded chiefly, in some instances almost entirely, by the industrious classes,—whereas a well-managed assessment falls chiefly on the proprietor and the capitalist,—it is sufficiently obvious in which case the *tax upon industry* is the most direct and oppressive.

Both these points have been fully proved in reference to Ireland, by Dr. Doyle and others, and they are illustrated, especially by the recent history of the Highlands and Islands. Different causes have no doubt been concerned in producing the excessive population there existing; and there is a difference of opinion even among practical observers, as to the

* Mr. Tait informs us that he has since extended his researches, and finds "150 families who may be said to be absolutely destitute, and 200 more whose income is insufficient for their support, making in all 350, of whom only 47 receive parish aid."

influence of each; some attribute the evil chiefly to the kelp manufacture and its failure, while others maintain, apparently on good grounds, that in certain districts at least, the kelp has had very little to do with the matter;* some ascribe the excessive population to the practice of subletting farms, while others assert that this practice was adopted as a means of providing for an excessive population already existing.† But there is no difference of opinion on the facts which concern us in the present inquiry. 1. It is certain that this excessive and still increasing population is coincident with, and is not in the least checked by, an extremely destitute, and, because destitute, degraded state of the lowest people; and I formerly endeavoured to shew that the experience of many nations, and the observation of the uniform tendency of human conduct in these circumstances, authorize the belief that this destitution and degradation are mainly instrumental in keeping up the redundant population. 2. It is equally certain, that as there is no compulsion on the proprietors in the absence of assessments, so also there is no regular or uniform exertion, and in many instances, hardly any exertion at all, made by them for the relief of this destitution; the burden of which falls therefore chiefly, and in some places almost exclusively, on the industrious classes. The Rev. Dr. M'Leod, for example, certainly a witness who has no prejudice *against* the proprietors, when asked whether the absentee proprietors contribute in proportion to their means, to the relief of the distress on their properties, answers, "No, I will not say that they do." But indeed it is explicitly avowed, by all who defend the present system of management of the poor in the highlands, that in so far as the destitution there is relieved, and the people preserved from starvation, it is done by the industrious classes; and the great object of the proprietors and their agents, in opposing any assessments seems to be, to prevent any obstruction to this continual flow of charitable aid from these classes to their poorer neighbours; they seem to regard this application of a large portion of the fruits of the industry of those people, as a wholesome exercise of Christian virtue, with which it would be quite improper to interfere by making any other provision for the destitute. Thus, Mr. M'Kenzie says, "I do not think if there were a poor assessment, the poor would be so well off as they are now; for the people (*i. e. the labouring people*) give them meal, potatoes, and plenty of fish; *everything which they have, they divide with them.*"—(Second Report, p. 35.)

But as I think it can scarcely be maintained, that the duty of the rich to the poor is performed by merely witnessing and applauding their charitable acts to one another, and refraining from all such interference as would supersede the necessity of such acts of kindness, so I apprehend the existence of these virtues among the lower orders cannot be regarded as a sufficient reason for exempting the higher orders from the duty of "opening wide their hands unto their poor brethren," in the manner which the experience of other nations shews to be most effectual for their relief.

Of the actual condition of the poor on the non-assessed estates of absentee landlords in the highlands and islands, of their excessive numbers, of the manner in which they are preserved from starvation, and of their

* Evidence of M. M'Kenzie, Esq., 2d Report of Committee on Highland Emigration, p. 22.

† Evidence of the Duke of Argyll, 2d Report, p. 35.

despondency and improvidence,—the natural consequences of their comfortless condition,—the following short extracts from letters written by correspondents of Robert Stevenson, Esq., Engineer, and with which he has favoured me, afford some information. The first is from Mr. John Reid, principal lighthouse keeper at Barra head.

“The general wants of the people in Barra are the want of employment,—the want of capital to give them the means of fishing, and the high rent of lands. More than a hundred families in Barra have no visible means of living; they eke out their subsistence by leave given by some of those who hold lands, to till a part of them for potatoes; and if this crop fails, *they share here and there where a potato can be got*. Those who have boats to fish generally distribute the heads of the fish to the poorer as a help to their food. The wretched state of their bed-clothes and bodily clothing has gradually increased since they were deprived of the liberty of having sheep; their beds are not so good as many beasts have,—a few bundles of grass or weeds, with a blanket; many never take off their clothes but when wet. Two years ago, a man and wife and five children came here to seek their subsistence from the birds on the rocks. A few sticks, an old chest, a pot, and one blanket formed their stock; soon we *and the tenants had to keep them alive*, or they must have died;—next year he planted some potatoes, and so continued. In every island there are some such, and many on the main land. Thus few are above want, *and those made to live hardly enough, giving to the distressed every day*. As to parish relief, all are so poor that there are none to contribute; no collection is gathered at the church nor has any church relief been had in these times of want.”

“The people are intemperate; having no comfort in a home, drink is their only enjoyment; if they had substance, they know that as they are indebted to the landlord, to him it must go; until they acquire some property, they will never be careful, and *never provide for to-morrow*. Diseases prevail much among them—typhus fever has been again this spring in South Uist. Two in one house died there the day I was there, and many are ill. They do not rely on themselves for the wants of life, but *look to others to relieve them when necessity calls them to ask*. *I have found many of them in this belief*. They press each their claim, not considering the hardship on the giver, *to share with so many needy persons the hard-earned overplus above his own necessities*.”

The next is from Lewis M'Ivor, Esq., merchant, Stornoway.

“In the town and parish of Stornoway there are several hundreds in want,—many whose food is scanty and precarious, and *who could not live but for the aid given them* from time to time by the few well-disposed people who can give them meal on credit or in charity. I think the poverty is not caused by intemperance, but principally by want of employment, and constant shifting of the poor people from farm to farm in this unfortunate island. There are many labourers idle from want of employment,—many that can get no work for half the year. There are many widows with large families, principally sailor's widows whose husbands have been drowned, and many poor old maids. *The poor draw their support from going round their parishes three or four times a year*,—they get a portion of meal in each family, and there is no instance of actual starvation, as the people are most charitable. There are about 250 on the poor's-roll, who get *from 1s 6d. to 3s. 6d. each in the year*.” Thus their dependence must be almost exclusively on

this organized mendicity among the industrious inhabitants. In fact, this miserable and comfortless population, which has grown up in the absence of assessments, and in the absence often of almost any assistance from the proprietors of the land, has now so burdened the tenantry as to threaten a more complete though indirect absorption of the rent of the soil, than resulted from the poor-rates under the old system in any part of England, which supported the population there in a very different degree of comfort.

The following is from Mr. D. L. Campbell, surgeon, and relates to the condition and habits of the poor in the island of Tyree.

“ Distribution of the funds of the Kirk Session in the last three years :—

Years.	No. of Paupers.	Sum distributed.		
		£.	s.	d.
1839	65	25	9	0
1840	65	22	14	6
1841	79	21	9	6

“The last census gives a population of 5000, which is at the rate of 110 persons to the square mile, and this is a great deal more than the island can support. Emigration might prove a temporary cure, but the habits of the people must be improved before any permanent circumscription of the population within proper limits can be looked for. The great cause of pauperism is *the custom of marrying young*. A man no sooner reaches the age of 20 than he gets married. The rent is in a great measure paid by the grain they can raise, or the beasts they can rear, and what they subsist on it is difficult to say. A crofter at Balaphim, with six children, has not been able to go to church since he married for want of clothes, and has been without bedclothes for years, as he declared to the factor and others lately. I may mention also the case of a blind widow with three children, *supported by the charity of the workmen* and others employed by the Commissioners here. Much to the credit of the masons, a society has been formed among them for educating destitute children, and *I may add for feeding them also*. Were it not indeed for the charity of the few who are able to give some scraps of meat and clothes, many of the people would be in a state of nudity and famine. These facts you may depend on. I have been cautious not to believe everything told me. The country is in a fearful state of destitution; and should an inquiry be instituted many almost incredible things will be brought to light.”

But in all parts of Scotland, the inequality of the burden imposed by the poor, on the profits of industry, and on income arising from land or capital, is more or less obvious.

Thus, Mr. Stewart, after stating the inadequacy of the parochial relief at Lockerby, says, “It often, very often happens that their relief may come only from some next door neighbour, whose sympathy may be sincere, but whose means may only allow of their affording such aid as may save from starvation.”

Mr. Anderson states at Inverness—“But for the known liberality and charity of *their poor neighbours, a little easier in circumstances than themselves*, the situation of the indigent poor here would often be most deplorable.”

Mr. Scott states at Peterhead that “the chief resource of the indi-

gent poor is a sum of about 500*l.* a-year, levied chiefly (by mendicity) *from the industrious part of the community*, and to which *many of the principal holders of property contribute little or nothing.*" (Remarks, &c., p. 36.) Again, as to the "principal source of the revenue of the kirk session, the collections made at the established churches, amounting to nearly 200*l.* per annum," Mr. Scott observes, that "it is contributed chiefly in half-pence," and "it is notorious that the landed proprietor, substantial farmer, shopkeeper, or master tradesman, gives in general just the *same sum, one halfpenny, as the poorest servant or labourer.* (p. 31.) Besides these sources of relief to the poor, (amounting to 700*l.* a-year,) he enumerates the Pauper Lunatic Asylum and Orphan Fund, raised by the congregations, and the Female Society and Coal Fund raised by voluntary subscription, which together amount to above 150*l.*, besides allowances to some of the poor from Friendly Societies formed amongst themselves, and from the Trinity House and Merchant Seamen's Fund,—and as the whole sum available for the poor, excluding their earnings, is not more than 950*l.*, it is obvious that nearly the whole of this sum is accounted for, without assistance from any but the industrious classes of the community. (See his calculations at p. 28, and seq.) It is therefore not surprising that we should find in this author the following observation, in accordance with one I formerly quoted from the late Rev. Dr. Andrew Thomson. "It is a fact which has frequently fallen under the notice of the present writer, that there does exist, among the middle and lower classes, a very general feeling of dissatisfaction, approaching to envy or jealousy, not unnaturally excited by observing many among the more wealthy members of the community, exempted from bearing their due share in the maintenance and relief of the poor, and availing themselves of this exemption." (p. 17.) And he seems justified in his practical conclusion, that by "prudent arrangement and careful management, *adequate provision may be made for the destitute at Peterhead, without imposing on the industrious part of the community a greater burden than they at present bear, provided that other parties, bound not only in law, but in justice, shall be brought to bear their due proportion.*" (p. 23.)

Nor is the burden of the maintenance of the poor in Scotland thrown on the industry of their own countrymen exclusively. The following extract from a letter, with which I have been favoured by Dr. Brown, of Sunderland, shows that it presses to some extent on our neighbours on the other side of the border.

The number of "tramps," *i.e.* beggars and vagrants, brought before the Bench in Sunderland in 1840, many of whom were heads of families, was—

English.
80

Irish.
66.

Scotch.
69

Dr. Brown adds,—“ Before I read your work, I was struck with the very large proportion of ‘tramps’ from a country so well regulated as Scotland has generally represented herself to be, brought before the Bench of which I am a member. As to the number of English, it is to be observed, that our commercial relations with various parts of England exceed by a hundred fold those from Scotland; and, moreover, that the English charged with begging are in many instances residents in the town and neighbourhood, who either prefer casual charity to parochial relief, or receiving this, beg without absolute necessity. The

Irish are in many instances wandering in search of work ; but it has appeared to me that the vagrants from Scotland have not worn the appearance of persons in search of employment, but have been the aged and infirm, who in England would have been objects of parochial relief."

Again, it will be remembered that Dr. Chalmers has repeatedly stated, that his principal reliance for the support of the poor, in all cases where the assessments are avoided in Scotland, is on the fund *ab intra*, i. e. the contributions of the poor to one another ; in which case of course, the maintenance of the poor is chiefly provided for by a direct tax on the industry of the working classes.

Another consequence of the present system in Scotland, which I formerly endeavoured to illustrate statistically is, the excessive accumulation of people, able-bodied and partially disabled, which takes place in certain districts, where there is a variable and precarious demand for their industry, and where charitable associations exist. This takes place chiefly in towns, but occasionally also in other districts, and is always referable to the same cause, the deficiency of provision for them when unemployed or partially disabled, in the places where they were born or have settled. Thus, the Report of the Committee of the House of Commons on Highland Emigration, states it as one result of their inquiries, that the deplorably redundant population along the west coast of the highlands, was "farther maintained, and its tendency to increase confirmed by the consolidation of farms in the interior of the country, which had the effect of removing the people from the glens to the coast, where they found it more easy to obtain subsistence either by fishing or the manufacture of kelp." Thus the maritime districts became overburdened with partially employed stranger poor, and when these means of precarious employment failed, had no power to relieve themselves, and equalize the burden over the country, as may be done where a well managed and efficient legal provision exists.

It has been stated, I think with perfect justice, that the parish which in equity should be bound to support the poor when they become destitute, is that which has profited most by their labour, or, in case of women and children, by the labour of their husbands or fathers ; and there is so much statistical evidence in my former papers, and in the reports of the Association on Pauperism in Edinburgh, to prove that the large towns in Scotland are burdened with poor much beyond what this principle will justify, that I shall only add here, in continuation of it, a very few documents.

"Of 259 applicants for legal relief at Peterhead, 112 are natives of the parish, and the remaining 147 have acquired a claim in virtue of their own residence, or that of their relatives, *frequently very little exceeding the period* (of three years) *required by law.*" (Scott, p. 25.)

Of 499 examined, and admitted on the roll at Inverness,

The natives of the town and parish were	179
Not natives, but 30 years resident . . .	164
From 10 to 30 years resident	112
From 3 to 10 years resident	39
Doubtful cases	5
	<hr/>
	499*

* Appendix to Mr. Anderson's Report above quoted.

The proportion of admitted paupers of short residence is here less than had been anticipated at Inverness; but it is to be observed that this town is not assessed, and that the main reason of the disinclination to the assessment, notwithstanding the miserable condition of the poor, is the conviction that assessment would lead to a rapid influx of poor from the surrounding districts. (See Evidence of Rev. W. M'Pherson.)

That such influx has taken place to a great extent at Aberdeen, is unequivocally shown by documents formerly quoted, and by the following Table, drawn up from lists with which I was favoured by Baillie Forbes:—

Whole number on the roll	.	1612
Born in Aberdeen	. .	452
Born elsewhere	. . .	1160
		<hr/> 1612 <hr/>

Two documents from Glasgow, dated in the present year, illustrate the same point:—

1. From a Return, transmitted by Captain Miller to the Association, of the circumstances of 455 weavers out of employment in Glasgow in June, 1841, it appears, that the heads of families born in Glasgow were only 120 out of the 455; and further, that of 1851 children in these families only 430 were born in Glasgow, showing that most of these families had but recently settled there.

2. The Report of the Directors of the Night Asylum at Glasgow for 1841 contains the following passage:—"By reference to Table A it will be seen, that 3,035 have been received from Glasgow and suburbs, and 6,525 from other parts. In 1840 these numbers were 2,440 from Glasgow, and 6,752 from other parts (whereof 4,714 from other parts of Scotland, 2,038 from England and Ireland). This simple statement shows how much the inhabitants of Glasgow have to provide for the support of the poor of other districts; and, in the opinion of the directors, is additional evidence that legislative or other measures should be taken to induce every locality to support in an efficient manner its own poor."—(Report, p. 8.)

I think there is comparatively little objection made in Scotland to a more uniform and effectual legal provision being made for the aged and disabled poor; although it is strongly, and I think justly felt in towns, that measures for this purpose adopted in them, would soon entail on them an unequal and excessive burden, if not attended by a modification of the law in two particulars,—*first*, an extension of the term of years required for obtaining a settlement; and *secondly*, a power of enforcing the law in all parts of the country, as to adequate relief to aged and disabled persons, to be lodged in the Sheriff Courts; instead of the decisions of the Kirk Sessions and managers of the poor being, as at present, liable to review only in the distant, and for practical purposes, inaccessible Court of Session. But more difficulty is felt as to the expediency of granting a right of relief to persons destitute only from want of employment; and it is sufficiently obvious that this kind of relief requires to be more carefully guarded against abuse than any other. But that it may be so guarded by aid of the experience of other countries, for example, of the northern parts of England, where the Poor Laws

were never abused, seems to me quite certain ; and I shall conclude this paper with stating the principal social evils, (all of them capable of statistical proof, but some of which would require more copious illustration,) which I think necessarily result from the absence of such provision. These evils (as I think) make any legal provision against destitution which shall exclude the influence of this cause, really ineffectual for the beneficial purposes which such provision is fitted to secure.

1. So large a portion of the destitution now existing in Scotland, or I believe in any long inhabited country, especially where there are great manufactories, arises from this cause, that unless the legal provision include this portion, it leaves great masses of misery unrelieved ; and experience shews that there is no security for the unhappy condition of these persons attracting the attention of those who have the means of relieving them until, as Dr. Sym expresses it, “their distress can be endured no longer.”

2. By the frequent recurrence of this kind of distress, numerous families are degraded, and the children brought up in that state of abject destitution, of which the experience of all nations shews the natural consequence to be—the absence of prudence and foresight, early marriages, and a morbidly redundant population, extending and perpetuating the evil ; of which the present condition of the Irish and Highland peasantry, and of the Glasgow hand-loom weavers, are memorable examples. Thus the families of 455 unemployed and very destitute weavers, reported to the association at Edinburgh by Captain Miller at Glasgow, consist of 1,851 children.

Two facts noticed by Dr. Sym at Ayr, strikingly illustrate the degradation of labouring families which is the inevitable result of unrelieved distress from want of employment, and which, if the principle above-stated be true, is the inevitable cause of farther destitution and suffering. The first is, the extent to which the business of pawnbrokers is increased, “when the industrious poor are reduced to temporary difficulties. One of these pawnbrokers informs me that he has nearly 4000 transactions during each of the winter months, and that not more than 1 or 2 per cent. of the pledges are left unredeemed, *except during severe and protracted depressions of trade*. This shews that most of his customers are industrious people, labouring under temporary difficulties ;”* but when these difficulties are more permanent than usual, and the pledges are left unredeemed, then begin the destitution and degradation of their families ; not to be remedied, as the same author observes, *merely* “by impressing on their minds the importance of sobriety, industry, cleanliness and piety.”

Again, Dr. Sym remarks, “The hand-loom weavers ought not to bring up their children to the loom, now that the extensive introduction of machinery has reduced that trade to its lowest ebb. It is the poverty of the parents that obliges them to employ their sons in weaving as early as their strength will permit, and the practice cannot easily be checked without either improving the circumstances of the parents, or giving the children some other profitable employment.”†

3. Another consequence of the unemployed labourer having no resource, is, that he is often compelled to submit to such terms as his employers may dictate, and hence another cause of degradation, injurious

* Sanatory Report on Ayr, p. 11.

† Ibid. p. 19.

not merely to himself, but to his country. The system of *bondaging*, which has become very general in some of the agricultural districts of Scotland was described to me by the late Rev. Mr. Harkness of Fala, as "a species of domestic slavery," to which the field labourers are compelled to submit, by the knowledge that when thrown out of employment, they have no resource but beggary. "A woman's wages are 9*d.* a-day when employed the whole day, but in winter they are generally engaged at 1*d.* the hour, and are seldom employed more than 5 or 6 hours. For 6 or 7 weeks during winter the bondagers and day labourers are not employed at all; but the condition on which they hold their houses requires them to be always ready when called upon, to work either by the day or hour, according to the pleasure of their masters. They cannot engage in any labour which may prevent their being ready at any hour they may be required, without forfeiting their houses." "I know nothing that bears so hard on the labouring classes as this system; it has brought many of them to ruin and hopeless destitution,"

He adds, I think quite justly, "It is the low standard of comfort and enjoyment to which the labouring class is now reduced, that renders the management of paupers a matter of extreme difficulty."

4. In other circumstances the absence of any protection against destitution, induces the labourers to form combinations for keeping up the rate of wages, more general and more formidable, I believe, with us, than in any countries where an effective provision for *bonâ fide* unemployed labourers exists.

5. Another very frequent consequence of this state of things is, that men are obliged to "wander in search of work," without any definite object, and first leave and then desert their families, as these irregular and desultory habits become predominant.

6. Lastly, in regard to the excessive extension of epidemic diseases, particularly fever, I think it sufficiently established by the facts to which I have above referred, that it is the destitute condition of the unemployed poor, which especially favours this scourge of humanity; and that any legal provision which should be confined to the aged and disabled, would leave this evil nearly untouched.

For all these social evils, I humbly apprehend that whatever other remedies are applied, one is essential, viz. *protection against destitution*. I do not indeed suppose that this can be given with absolute certainty to the whole people in any country, nor that occasional extraordinary aid to the destitute poor will not be required, particularly in manufacturing districts, under any system of provision against their usual or average degree of suffering; but I confidently maintain that such protection is much more generally and effectually given in England, Holland, and Germany, under the operation of an effective but regulated legal provision for the poor, than in Scotland; and that all suppositions of the benefits derived from the absence of it in Scotland, either as regards the numbers of the people, or their comforts, or their moral character, are wholly without foundation. And unless it be thought wise that the poor of Scotland should be regarded as a separate *caste*, not entitled to the consideration and protection from the legislature which is given to the native poor of England, I may perhaps be permitted to express the hope that a sufficient ground has been laid for a farther and more authoritative inquiry into the accuracy of these statements.

Comparative Statement of the Income and Expenditure of certain Families of the Working Classes in Manchester and Dukinfield, in the Years 1836 and 1841. By WM. NEILD, Esq., Mayor of Manchester.

[Read before the Statistical Section of the British Association, 3rd August, 1841.]

My partner, Mr. Graham, has, in consequence of conversations between us upon the situation of the working classes, prepared the annexed statements, upon which he has bestowed great care, in order to make them as nearly accurate as possible. The facts recorded are from the personal statements of the parties themselves, so far as the expenditure for the year 1841 is concerned; but to obtain a correct statement of the actual expenditure of the same parties in a former year would be almost impossible, as they seldom or never possess written documents to guide them. Moreover, the comparison of the real expenditure of a particular family in 1841 with the real expenditure of the same family in 1836 is, in nearly all cases, impossible; as the family itself may be wholly changed, and the elements of comparison be thus destroyed: therefore the only legitimate method of arriving at the expenditure for 1836, and rendering it at the same time comparable with that of 1841, is by computation, assuming the purchase of the same amount of commodities and accommodation as in 1841, and stating their cost according to the altered prices prevailing in 1836. For this purpose the statement No. 3 was drawn up, which contains the retail prices in Manchester of all the usual articles of household expenditure in both of the years 1836 and 1841.

The method by which the year 1836 is thus brought into comparison with 1841 will be better understood by an example. In the case No. 1 of statement No. 1, that of a machine-printer, it appears that he has laid out for flour or bread 10s. 10d. as a weekly average during the year 1841, and, as it will be seen by the comparative statement of prices that flour has altered in price in Manchester since 1836 from about 1s. 10d. per dozen lbs. to 2s. 4d., or in other words has risen in value 27 per cent., he would have had to lay out in 1836 only 8s. 5d. instead of 10s. 10d. for the same quantity.

All the computations for 1836 are made on this principle; a great deal, therefore, of the value of these tables depends upon the accuracy of the statement No. 3. Fortunately the information contained in it is easily obtained; and care was taken that no exaggerated prices should be inserted in either year. With regard to the item "rent of cottages," the fall in the weekly rent appears from the statement to be from 5s. to 4s., giving a weekly advantage to the occupier for 1841 to the extent of 1s. or 20 per cent. The value of cottage property undoubtedly has greatly fallen since 1836, perhaps even as much as 20 per cent.; but this is owing partly to the large number of unoccupied houses, and partly to the rents of those that are tenanted being very irregularly paid. Therefore it may be questioned whether the paying tenant has received so much as the 20 per cent. of advantage, yet in these statements the families are supposed to have gained in 1841 to the extent of that reduction in rent. The only other item in this statement, the price of which appears in favour of 1841, is the article tea, which has fallen from 6s. to 5s., or 17 per cent. All the other items have risen more or less, or remain the same in both years. For instance, the

article flour has really ranged from 1s. 8d. to 2s. 7d. per dozen lbs., showing a rise in price of 55 per cent. between the two extremes. Exaggeration has been avoided in this important item of expenditure by taking the prices of 1s. 10d. for 1836 and 2s. 4d. for 1841, namely, the *highest* price for the former, and the *lowest* during the latter year; thus giving it against 1841 to the extent only of 27 per cent. The machine-printer, No. 1, has a weekly disbursement during 1841 of 10s. 10d. for bread; in 1836 it would have been 8s. 5d. for the same weight, showing a reduction in the value to himself of this person's labour to the amount of 2s. 5d. in the article of bread. Butchers' meat it will appear has altered from 4½d. and 5d. during 1836 to 8d. and 8½d. for 1841, showing a rise of 54 per cent. since 1836; and by again referring to the case of the machine-printer, No. 1, it will be observed that 11s. 8d. is his weekly expenditure on meat for 1841, while 7s. 3d. would have purchased the same weight of animal food in 1836, showing a further weekly reduction in the value of his labour to himself of 4s. 5d. weekly. By proceeding on this principle the total expenditure comparatively for 1836 is accurately obtained. The total weekly household expenditure of the above machine printer for 1841 was 2l. 15s. 8d., while for 1836 it would be 2l. 6s. 8d., showing a difference of 9s. against 1841 in the weekly value of the labour of this family. In the 18 other cases in statements Nos. 1 and 2, the same rule was followed.

The first twelve cases, numbered 1 to 12, are of families residing in Manchester, and were selected because they were of sober and industrious habits. Their employment, also, during the general depression which has for some time existed in the trade of this district, has been almost uninterrupted, and their weekly wages have remained the same; so that they form an exception to the general situation of the working classes in their locality. Their respective means it will be observed vary considerably as compared with each other, 9s. 8d. being the weekly income for each individual in case No. 1, while in that of No. 12, a less favoured family, it is only 2s. 6½d. The last seven cases, numbered 13 to 19 in statement No. 2, are of families residing at Dukinfield, seven miles from Manchester, and were selected as instances more nearly approaching to the general state of the cotton trade; and, as in the case of the first twelve, personal knowledge of the parties gave a guarantee to the accuracy of their statements. Their employment and circumstances are different from those of the twelve first named: the wages of the twelve remained very nearly the same, while those of the seven were reduced in common with those of the generality of the working classes in the cotton trade. It should be remarked, however, that these seven cases will furnish a decidedly favourable instance of that branch of trade, as they have suffered much less from reduced hours of labour than many similarly employed.

Statement No. 4 is an abstract of the income of each family and of its expenditure, classified and expressed in per centage. It will be seen in this statement that the more opulent families, Nos. 1 and 2 for instance, having incomes for each individual of 9s. 8d. and 9s., expend on bread from 12·4 to 15·4 per cent. of their incomes; while, as we come down the list towards the poorer families the per centage rises rapidly and with great regularity: in case No. 12 it has risen to the extent of 39·1 per cent. The same interesting exemplification of the fact, that bread

forms the staple of the English labourers' food, is observed in the seven Dukinfield families. No. 13, with an income of 4*s.* 9*d.* per individual expends 17·4 per cent. of it on bread; while No. 19, with only 2*s.* 3*d.* per individual, expends 32·8 per cent. The same observations are applicable to the expenditure on other kinds of food: see meat, bacon, potatoes, &c., in the fifth column.

Statement No. 5 is a recapitulation of the total weekly income and expenditure of each of the 19 families. Attention should be directed to the fourth column, entitled "Left for instruction and the purchase of manufactured articles." It will be observed that in the year 1841 there was left to the 12 Manchester families, for the above purposes, the sum of 5*l.* 3*s.* 3*d.*, while in 1836 there was the larger sum of 7*l.* 10*s.* 5*d.*, making a difference of 32 per cent. against 1841; and the same fact is displayed in a still more marked manner in the case of the Dukinfield families, there being left for instruction and the purchase of manufactured articles for the year 1836, 2*l.* 7*s.* 8½*d.*; while for 1841 there is only 2*s.* 10½*d.*: and to put against this six of the families have gone into debt to the extent of 1*l.* 4*s.* 4*d.* The last column is entitled, "Going back in the world per week;" and in this, six out of the seven Dukinfield families are reported to be accumulating debt during the year 1841, while in 1836 they were, or had the means of being, all clear, of living within their incomes, and having a considerable sum to spare. In that year (1836) they had full wages, and food was moderate in price; in the year 1841 their wages were less, and food was dearer. Like the rest of mankind they had adapted their expenses to their most affluent circumstances, and are now the sufferers from a fluctuating income, and the victims of that incapacity to retrench so often observed in all ranks of society.

It is a very common, if not the general, practice for the working classes of this district to select a particular shopkeeper with whom they deal for all their provisions, and to whom they are generally in debt, and when a time of suffering comes, arising from reduced wages, want of employment, dear food, or the combination of all three, as is the case at present, they become more and more involved with the shopkeeper. This class of persons (the shopkeepers) are generally the first to feel reverses in manufacturing districts; and in all instances of considerable depression in trade numbers of them are ruined.

To insure to such statements as these as much accuracy as possible, some precautions are necessary in collecting the information. The husband can rarely furnish any statements in detail; it is better in nearly all cases to apply to the wife. She has her character, however, as an economical manager at stake, and requires cross-examining to elicit the exact expenditure. Without this she is also liable to err, not from any wish to mislead, but from mere want of caution and sufficient thought. In several cases the books of the shopkeeper were examined, and compared with the statements given by the parties themselves.

In conclusion I may be allowed to advert to the utility of such statements as the above, which tend to throw a light upon the resources and habits of the working population under different circumstances, and to furnish the means of comparing the condition of different classes of labourers according to the nature of their employments, or of their local position.

No. 1.—Average Income and House Expenditure for one week of Twelve Families in Manchester, comparing the Year 1836 with 1841.

Articles.	1. Machine Printer; Family, 9 individuals.				2. Millwright; Family, 10 individuals.			
	1836		1841		1836		1841	
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Income for each Individual per week	0	9	8	0	0	9	0	0
Total Income of the Family	4	7	0	4	4	10	0	4
Total Expenditure of ditto	2	6	8	2	2	2	2	2
Articles.	Weekly Expenditure of the Family.				Weekly Expenditure of the Family.			
	1836		1841		1836		1841	
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Rent	0	7	0	0	0	7	0	0
Flour or Bread	0	8	5	0	10	6	0	1
Meat	0	7	3	0	11	8	0	1
Bacon	0	1	6	0	1	6	0	1
Ham	0	4	6	0	2	0	0	0
Oatmeal	0	2	0	0	0	0	0	0
Butter	0	2	0	0	0	0	0	0
Eggs	0	1	8	0	2	6	0	0
Milk	0	1	6	0	1	6	0	0
Potatoes	0	1	9	0	1	6	0	0
Cheese	0	3	7	0	3	7	0	0
Tea	0	3	0	0	4	6	0	0
Coffee	0	3	0	0	4	6	0	0
Sugar	0	3	0	0	4	6	0	0
Treacle	0	3	0	0	4	6	0	0
Tobacco	0	1	1	0	1	1	0	0
Soap	0	1	0	0	1	0	0	0
Candles	0	0	2	0	0	2	0	0
Salt	0	2	3	0	2	3	0	0
Coals	2	6	8	2	15	8	0	6
Total	53	3	63	9	21	2	54	8
Articles.	Per Centage of Expenditure on the Total Income.				Per Centage of Expenditure on the Total Income.			
	1836		1841		1836		1841	
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Rent	8.	6.4	0	6	0	6	0	7
Flour or Bread	9.6	12.4	0	13	0	6	0	1
Meat	8.3	13.4	0	9	0	0	0	1
Bacon	1.7	1.7	0	2	0	0	0	0
Ham	5.1	7.	0	3	0	0	0	0
Oatmeal	2.3	2.3	0	0	0	0	0	0
Butter	1.9	2.9	0	1	0	0	0	0
Eggs	1.7	1.7	0	2	0	0	0	0
Milk	2.	4.1	0	1	6	0	0	0
Potatoes	4.1	5.1	0	2	0	0	0	0
Cheese	3.4	5.1	0	0	6	0	0	0
Tea	1.2	1.2	0	1	6	0	0	0
Coffee	1.2	1.2	0	1	0	0	0	0
Sugar	2.6	2.6	0	1	0	0	0	0
Treacle	2.6	2.6	0	1	0	0	0	0
Tobacco	1.2	1.2	0	1	0	0	0	0
Soap	1.2	1.2	0	1	0	0	0	0
Candles	2.	2.	0	0	0	0	0	0
Salt	2.6	2.6	0	1	0	0	0	0
Coals	53.3	63.9	0	6	21	2	54.8	0
Total	53.3	63.9	0	6	21	2	54.8	0

No. 1.—Average Income and House Expenditure for one week of Twelve Families in Manchester, &c.—continued.

Articles.	5. Washer; Family, 2 individuals.				6. Overlooker; Family, 6 individuals.				
	1836		1841		1836		1841		
	£.	s.	d.	£.	s.	d.	£.	s.	d.
Income for each Individual per week	0	7	0	0	7	0	0	5	8
Total Income of the Family	0	14	0	0	14	0	1	14	0
Total Expenditure of ditto	0	9	10	0	11	4	1	4	3
Articles.	Weekly Expenditure of the Family.				Weekly Expenditure for each Individual.				Per Centage of Expenditure on the Total Income.
	1836		1841		1836		1841		
	£.	s.	d.	£.	s.	d.	£.	s.		d.
Rent	0	1	3	0	1	0	0	0	10
Flour or Bread	0	2	1	0	2	8	0	0	11½
Meat	0	0	10	0	1	4	0	0	9¼
Bacon . . . . .	..	..	..	..	..	..	0	0	0¾
Ham . . . . .	..	..	..	..	..	..	0	0	0¾
Oatmeal . . . . .	..	..	..	..	..	..	..	..	..
Butter	0	0	9	0	1	0	0	0	4
Eggs	0	0	4	0	0	4	0	0	2
Milk	0	0	4	0	0	4	0	0	1½
Potatoes	0	0	4	0	0	6	0	0	3¼
Cheese	0	0	8	0	0	8	0	0	1½
Tea	0	0	6	0	0	5	0	0	2
Coffee	0	0	2	0	0	2	0	0	1
Sugar	0	0	7	0	0	10	0	0	4
Treacle	0	0	2	0	0	3	..	..	..
Tobacco	0	0	3	0	0	3	..	..	..
Soap	0	0	3	0	0	3	0	0	1
Candles	0	0	3	0	0	3	0	0	1
Salt	0	0	1	0	0	1	..	..	..
Coals	0	1	0	0	1	0	0	0	2¼
Total	0	9	10	0	11	4	1	4	7

No. 1.—Average Income and House Expenditure for one week of Twelve Families in Manchester, &c.—continued.

Articles.	7. Labourer; Family, 4 individuals.				8. Labourer; Family, 4 individuals.			
	1836		1841		1836		1841	
	£.	s. d.	£.	s. d.	£.	s. d.	£.	s. d.
Income for each Individual per week	0	5 6	0	5 6	Income for each Individual per week	0	5 3	0 5 3
Total Income of the Family	1	2 0	1	2 0	Total Income of the Family	1	1 0	1 1 0
Total Expenditure of ditto	0	16 9	0	19 1	Total Expenditure of ditto	0	18 4	1 1 3
Articles.	Weekly Expenditure of the Family.		Per Centage of Expenditure on the Total Income.		Weekly Expenditure of the Family.		Per Centage of Expenditure on the Total Income.	
	1836	1841	1836	1841	1836	1841	1836	1841
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Rent	0 3 9	0 3 0	17.	13.6	0 3 5	0 2 9	16.2	13.1
Flour or Bread	0 3 6	0 4 6	16.	20.4	0 3 9	0 4 10	17.8	23.
Meat	0 1 3	0 2 0	5.6	9.1	0 2 11	0 4 8	13.9	22.6
Bacon . . . . .	..	..	..	..	..	..	..	..
Ham . . . . .	..	..	..	..	..	..	..	..
Oatmeal	0 0 6	0 0 8	2.2	3.	0 1 6	0 2 0	7.1	9.6
Butter	0 1 1½	0 1 6	5.	6.8	..	..	..	..
Eggs	0 0 3	0 0 3	1.1	1.1	..	..	..	..
Milk	0 1 2	0 1 2	5.3	5.3	0 2 0	0 2 0	9.6	9.6
Potatoes	0 0 9½	0 1 2	3.6	5.3	0 0 4	0 0 6	1.6	2.5
Cheese	0 0 4	0 0 4	1.5	1.5	..	..	..	..
Tea	0 0 9¼	0 0 8	3.5	3.	0 0 9¼	0 0 8	3.6	3.2
Coffee	0 0 3	0 0 3	1.1	1.1	0 0 8	0 0 8	3.2	3.2
Sugar	0 0 8	0 1 0	3.	4.6	0 0 5½	0 0 8	2.2	3.2
Treacle	0 0 4	0 0 6	1.5	2.3	..	..	..	..
Tobacco . . . . .	..	..	..	..	..	..	..	..
Soap	0 0 6	0 0 6	2.2	2.3	0 0 8	0 0 8	3.2	3.2
Candles	0 0 4	0 0 4	1.5	1.5	0 0 8	0 0 8	3.2	3.2
Salt	0 0 1	0 0 1	.3	.3	0 0 6	0 0 6	2.3	2.3
Coals	0 1 2	0 1 2	5.3	5.3	0 0 8	0 0 8	3.2	3.2
Total	0 16 9	0 19 1	75.7	86.5	0 18 4	1 1 3	87.1	101.9

No. 2.—Average Income and House Expenditure for one week of Seven Families in Dukinfield, &c—continued.

Articles.	15. Labourer; Family, 6 individuals.						16. Card Room Hand; Family, 3 individuals.					
	1836			1841			1836			1841		
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
Income for each Individual per week	0	4	8	0	3	1½	0	3	9	0	2	10½
Total Income of the Family	1	8	0	0	18	8	0	13	0	0	8	8
Total Expenditure of ditto	1	0	11½	1	4	3	0	9	9	0	11	4
	Weekly Expenditure of the Family.						Weekly Expenditure of the Family.					
	1836			1841			1836			1841		
Rent	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
Flour or Bread	0	3	5	0	2	9	0	0	5	0	0	5
Floor or Bread	0	4	8	0	6	0	0	0	1	0	0	11½
Meat	0	2	0	0	3	2	0	0	0	0	0	5
Bacon	0	0	0	0	0	0	0	0	0	0	0	1
Nursing, Cooking, &c.	0	0	0	0	0	0	0	0	0	0	0	0
Oatmeal	0	0	7½	0	0	10	0	0	0	0	0	0
Butter	0	1	6	0	2	0	0	0	3	0	0	4
Eggs	0	0	6	0	0	6	0	0	1	0	0	1
Milk	0	1	6	0	1	6	0	0	3	0	0	3
Potatoes	0	1	0	0	1	6	0	0	2	0	0	2
Cheese	0	1	0	0	1	0	0	0	2	0	0	2
Tea	0	0	6	0	0	5	0	0	1	0	0	1
Coffee	0	0	3	0	0	3	0	0	0½	0	0	0½
Sugar	0	0	9	0	1	0	0	0	1½	0	0	2
Treacle	0	0	2	0	0	3	0	0	0½	0	0	0½
Tobacco	0	0	6	0	0	6	0	0	1	0	0	1
Soap	0	0	9	0	0	9	0	0	1½	0	0	1½
Candles	0	0	3	0	0	3	0	0	0½	0	0	0½
Salt	0	0	1	0	0	1	0	0	0	0	0	0
Coals	0	1	2	0	1	2	0	0	6	0	0	6
Yeast	0	0	4	0	0	4	0	0	3	0	0	3
Total	1	0	11½	1	4	3	0	3	6	0	4	0½
	129.6			74.7			129.6			75.		
	14.7			14.4			14.4			130.3		
	32.1			33.6			33.6			11.4		
	16.9			14.4			14.4			5.8		
	. . .			3.8			3.8			. . .		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
					

No. 2.—Average Income and House Expenditure for one week—continued.

Articles.	19. Mechanic's Assistant; Family, 7 individuals.						1836			1841		
							£.	s.	d.	£.	s.	d.
	Income for each Individual per week . .						0	3	3½	0	2	3
	Total Income of the Family						1	3	0	0	16	0
	Total Expenditure of ditto						0	17	9	1	0	4½
	Weekly Expenditure of the Family.		Weekly Expenditure for each Individual.		Per Centage of Expenditure on the Total Income.							
	1836	1841	1836	1841	1836	1841						
Rent	0 3 4	0 2 8	£. s. d. 0 0 5¾	£ s. d. 0 0 4¼	14.5	16.6						
Flour or Bread . . .	0 4 1	0 5 3	0 0 7	0 0 9	17.7	32.8						
Meat	0 0 11¼	0 1 6	0 0 1½	0 0 2½	4.1	9.4						
Bacon	0 0 8½	0 1 0	0 0 1¼	0 0 1¾	3.1	6.3						
Nursing, Cooking, &c.	0 . . .	0 . . .	0 . . .	0 . . .	. . .	. . .				
Oatmeal	0 0 7½	0 0 10	0 0 1	0 0 1½	2.7	5.2						
Butter	0 0 11¼	0 1 3	0 0 1½	0 0 2¼	4.1	7.8						
Eggs	0 . . .	0 . . .	0 . . .	0 . . .	. . .	. . .				
Milk	0 1 6	0 1 6	0 0 2½	0 0 2½	6.5	9.4						
Potatoes	0 0 7	0 0 10	0 0 1	0 0 1½	2.5	5.2						
Cheese	0 0 8	0 0 8	0 0 1	0 0 1	2.9	4.2						
Tea	0 0 7	0 0 6	0 0 1	0 0 1	2.5	3.1						
Coffee	0 0 3	0 0 3	0 0 0½	0 0 0½	1.1	1.5						
Sugar	0 0 10	0 1 3	0 0 1½	0 0 2¼	3.6	7.8						
Treacle	0 0 4	0 0 6	0 0 0½	0 0 1	1.4	3.1						
Tobacco	0 . . .	0 . . .	0 . . .	0 . . .	. . .	. . .				
Soap	0 0 10	0 0 10	0 0 1½	0 0 1½	3.6	5.2						
Candles	0 0 2	0 0 2	0 0 0¼	0 0 0¼	.7	1.						
Salt	0 0 1	0 0 1	. . .	. . .	.3	.5						
Coals	0 1 0	0 1 0	0 0 1¾	0 0 1¾	4.3	6.3						
Yeast	0 0 3½	0 0 3½	0 0 0½	0 0 0½	1.3	1.8						
Total	0 17 9	1 0 4½	0 2 6	0 2 11	76.9	127.2						

No. 3.—Retail Prices in Manchester of the following articles of Household Expenditure in the year 1841, compared with 1836.

Articles.	1836	1841	Per centage alteration in price since 1836.	
			Rise.	Fall.
Rent, Cottage property . . .	5s.	4s.	percent	percent.
Flour per doz. lbs.	1s. 8d., 1s. 9d., and 1s. 10d.	2s. 4d. to 2s. 7d.	27	20
Meat per lb.	4½d. to 5d.	8d. to 8½d.	54	
Bacon „	4½d. to 5d.	7d.	40	
Ham . . . . . „	. . .	. . .	No variation.	
Oatmeal per peck of 10 lbs.	1s.	1s. 4d.	33	
Butter per lb.	9d. to 10d.	1s. to 1s. 1d.	33	
Eggs . . . . . „	. . .	. . .	No variation.	
Milk per pint.	1½d.	1½d.	dit to.	
Potatoes per 20 lbs.	7d. to 8d.	11d. to 1s.	50	
Cheese . . . . . „	. . .	. . .	No variation.	
Tea per lb.	6s.	5s.	17	
Coffee „	1s. 8d. to 2s.	2s.	No variation.	
Sugar „	5½d. to 6d.	8d. to 9½d.	45	
Treacle „	2½d.	3½d.	50	
Tobacco per oz.	2½d.	2½d.	} No variation.	
Soap per lb.	5d.	5d.		
Candles 8 per lb. dips.	6½d.	6½d.		
Salt per 4 lbs.	1d.	1d.		
Coals per cwt.	7d.	7d.		

No. 4.—Abstract of the Income of each Family, and of the per centage Expenditure of each on various Articles, in the year 1836, compared with 1841.

No.	Income per Week of each Individual.		Per centage Expenditure on				Tea, Coffee, Sugar, Treacle, and Tobacco.
	Bread alone.		Rent, Coals, Candles, and Soap.		Meat, Bacon, Butter, Eggs, Oatmeal, Milk, Potatoes, Cheese, Salt, Cooking, and Yeast.		
	1836	1841	1836	1841	1836	1841	
{ Manchester. }	s. d.	s. d.	per cent.	per cent.	per cent.	per cent.	per cent.
	9 8	9 8	9.6	12.4	13.0	11.4	21.2
	9 0	9 0	11.6	15.0	12.2	10.5	15.9
	7 7	7 7	12.1	15.4	29.6	26.3	24.0
	7 1½	7 1½	13.6	17.5	11.0	9.2	22.9
	7 0	7 0	14.8	19.0	19.5	17.7	23.8
	5 8	5 8	13.2	16.9	24.8	19.7	24.7
	5 6	5 6	16.0	20.4	26.0	22.7	25.0
	5 3	5 3	17.8	23.0	25.8	22.7	34.4
	4 0	4 0	25.0	32.0	16.7	15.0	29.3
	4 0	4 0	24.1	31.2	23.7	20.0	32.5
	3 0	3 0	27.7	36.3	28.5	23.8	18.8
{ Dukinfield. }	2 6½	2 6½	30.4	39.1	22.1	19.5	43.1
	7 2	4 9	8.9	17.4	12.9	17.1	16.0
	6 2	4 0	10.6	20.8	16.7	22.8	13.8
	4 8	3 1½	16.6	32.1	20.0	26.2	29.3
	3 9	2 10½	17.3	33.6	20.8	27.4	21.7
	3 10	2 10	16.3	31.4	26.9	35.5	22.8
	3 7½	2 8	17.2	32.8	25.8	33.9	24.0
	3 3½	2 3	17.7	32.8	23.1	29.1	26.2

No. 5.—Recapitulation of the Income and House Expenditure of each Family, and of the Surplus left for other purposes, in the year 1836, compared with 1841.

No.	Total Income of Family per Week.			House expenditure of Family per week.			Left for instruction and the purchase of Manufactured Articles.			Going back in the World per Week.		
	1836		1841	1836		1841	1836		1841	1836		1841
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
Manchester.	1	4	7	0	2	15	2	0	4	1	11	4
	2	4	10	0	2	9	2	7	10	2	0	5
	3	0	15	2	0	13	0	3	5	0	1	10
	4	2	17	0	1	2	1	4	10	0	16	11
	5	0	14	0	0	11	0	4	2	0	2	8
	6	1	14	0	1	7	0	9	9	0	6	2
	7	1	2	0	0	19	0	5	3	0	2	11
	8	1	1	0	0	1	0	2	8	0	1	0
	9	2	0	0	1	19	0	8	0	0	1	0
	10	1	0	0	0	1	0	8	0	0	0	8
	11	1	1	0	0	1	1	10	0	1	1	11
	12	1	3	0	1	10	0	1	1	0	2	2
Total . .	22	4	2	14	15	11	17	9	8	0	2	2
Dukinfield.	13	1	16	0	16	0	5	5	1	0	5	1
	14	1	17	0	0	18	0	18	9	0	2	10
	15	1	18	0	1	4	0	7	0	0	5	7
	16	0	13	0	0	11	0	3	3	0	2	8
	17	1	16	0	0	19	0	4	8	0	4	10
	18	0	16	0	0	14	0	3	3	0	3	10
	19	1	3	0	0	1	0	5	3	0	4	4
Total . .	8	0	0	5	12	3	6	7	8	1	4	4

On the Population of the Burman Empire. By Lieutenant-Colone
H. BURNEY, Bengal Army, late Resident at the Court of Ava.

IT is well known to most persons who have visited Burmah, that a census of the population of that empire was taken about the year 1783, or Burmese year 1145, shortly after Mendaragyee, the grandfather of the present monarch, assumed the throne.

During my residence at the late capital, Ava, I observed that this census was often referred to in official correspondence, and I learned, that the voluminous papers connected with it, as well as with another census which the late king directed to be taken in the year 1826, were deposited in the archives of the palace, to which few of the subordinate officers had free access. It was long before I could persuade any of these officers to bring me copies of such portions of these curious records as they could secretly transcribe; but I succeeded at last in some measure, and having now compared, arranged, and made a literal translation of all that they brought to me at different times, I beg to present it for the examination of those who will take an interest in the subject. The annexed returns, it will be seen, comprise :*—

1st. A list, marked A, of the number of houses, taxable and untaxable, in each district of Burmah Proper and Pegu, as returned by the census taken in 1145, or A.D. 1783, and by that in 1188, or A.D. 1826.

2nd. A list, marked B, of the number of houses liable for public or military service in the different Shan states or districts subject to the King of Ava, as taken about the year 1800 by the present Kyi Wungyee's father, the Myen Wungyee.

3rd. Lists, marked C, of the number of houses in the three principal cities, Ava, Amarapura, and Isagain, and in the villages within the jurisdiction of each, as delivered in to the government of Ava by the proper officers in the month of January, 1827.

From these returns, joined to other information which I gathered whilst residing at Ava, I have framed the following estimates of the population of the Burmese Empire in the years 1783 and 1826.

[For Estimates, &c., see following page.]

In the annexed statements I have not included Arracan, because I could obtain no lists on which I could depend of its population under the Burmese Government, and that kingdom was not conquered until after the census of 1783 had been ordered. The capital of Arracan appears to have been taken about the 4th January, 1785. One document brought to me relating to its population was as follows, and the copyist declared that the figures denoted the number of houses in each province:—

Province.	Arracanese.	Burman.	Other Places.	Total.
Arracan	104,696	783	15,372	120,851
Ramree	57,879	560	2,351	60,790
Cheduba	19,770	220	10	20,000
Sandoway	20,095	861	9,704	30,660
Total	202,440	2,424	27,437	232,301

* These returns being too voluminous for insertion in the Journal, may be referred to in the Society's library. An abstract of each is inserted in Appendix No. 2, at the end of this paper, marked with letters corresponding to the more detailed returns.

Census of 1783.		No. of District Towns in each Division.	No. of Villages in each Division.	No. of Houses liable to Assessment.	No. of Houses not liable to Assessment.	Total No. of Houses in each Division.	Total No. of Population in each Division, allowing Seven Persons to each House.
City of Amarapura		1	..	4,248	9,596	13,844	96,908
Villages subordinate to ditto . . . . .		..	27	199	1,368	1,567	10,969
City of Isagain		1	..	833	3,179	4,012	28,084
Villages subordinate to ditto . . . . .		..	41	439	1,960	2,399	16,793
City of Ava (deserted in 1783)		1	..	25	48	73	511
Districts lying between the Capital and the North-west Frontier		41	921	38,905	31,146	70,051	490,357
Ditto between the Capital and the Western Frontier		15	505	14,690	5,149	19,839	138,873
Ditto on the banks of the Erawadi, to the North of the Capital		19	220	2,646	1,519	4,165	29,155
Ditto on the banks of ditto, to the South of the Capital		41	2,119	52,518	14,113	66,631	466,417
Ditto between the Capital and the South-east Frontier, to the East of the Erawadi		35	1,065	30,247	15,705	46,042	322,294
Tait, or Demesnes of the Crown		12	523	18,431	25,077	43,508	304,556
Myen, or Cavalry Jaghires		2	205	4,223	3,672	7,895	55,265
Yuwun-zu, Kywun wun-zu, and other Districts superintended by the Royal Treasurer and other Officers of the Court		6	50	..	14,508	14,508	101,556
Miscellaneous, or not included under any of the above Divisions		14	59	47	1,476	1,523	10,660
Total according to the Returns in 1783		188	5,735	167,451	128,606	296,057	2,072,399
Add ten per cent. for omissions in the Returns . . . . .		..	..	16,745	12,860	29,605	207,239
Total estimated population of Burmah Proper and Pegu in the year 1783. Add population of Ye, Tavoy and Mergui, ceded to the British Government in 1826		188	5,735	184,196	141,466	325,662	2,279,638
Amount of the various wild tribes subject to Ava, estimated by Mr. Crawford at . . . . .		..	150	..	..	4,286	30,002
Probable amount of the population of the Shan States and Districts subject to Ava . . . . .		..	..	..	..	..	830,000
Total estimated population of the Burmese Empire in the year 1783		188	5,885	260,596	76,400	152,800	1,069,600
					217,866	482,748	4,209,240

Census of 1826.		No. of Villages.	Total No. of Houses.	Total No. of Population, allowing Seven Persons to each House.
City of Ava, reckoning each subdivision of the town as a village		59	7,610	53,270
Villages subordinate to Ava		142	8,360	58,520
City of Amarapura		97	11,494	80,458
Villages subordinate to ditto.		27	1,567	10,969
City of Isagain		90	4,012	28,084
Villages subordinate to ditto		117	7,885	55,195
Total according to the Returns delivered		532	40,928	286,496
Add ten per cent. for omissions in ditto		..	4,092	28,644
Total population of the three cities and villages subordinate, in 1826		. . . . .	45,020	315,140
Ditto of the remaining Districts in Burnah Proper and Pegu, according to the Returns.			261,795	1,832,565
Add ten per cent. for omissions in ditto		. . . . .	26,179	183,253
Total estimated population of Burnah Proper and Pegu in the year 1826		. . . . .	332,994	2,330,958
Add as before, for the wild tribes		. . . . .	..	830,000
Add population of the Shan States and Districts subject to Ava		. . . . .	..	1,069,600
Total estimated population of the Burmese Empire in the year 1826		. . . . .	..	4,230,558

Colonel Symes estimated the population of that country at 3,000,000, but this must have been far too high. Shortly after it came into our possession the inhabitants were reckoned by the late Mr. Paton not to exceed 100,000 in number,* and a more complete census taken in the year 1835, gave a total of no more than 209,184. The people were of course very much reduced in number between the time of the Burmese conquest and our occupation, owing to repeated insurrections and to extensive emigrations into our territory; still at the time when Colonel Symes wrote, in 1795, judging from the actual returns of the other portions of the Burmese dominions, I should not be inclined to allow Arracan a population exceeding 500,000.

The above statements certainly reduce the population of the Burmese empire to a much lower amount than that at which all previous writers, with the exception of Mr. Crawford, had estimated it; but this is not the first instance of a census, or the result of some actual computation, showing that all preceding estimates were gross exaggerations. The late Mr. James Prinsep's census of the city of Benares reduced the population from 600,000, which it had been previously supposed to be, to 181,482 only.†

I am inclined to place most reliance on the census of Burmah taken in the year 1783, for I learnt at Ava, that the old king, Mendaragye, had used the most severe and extraordinary measures to obtain correct returns, and that he was employed nearly two years on the work. He displaced many, and even put to death some of the provincial officers for bringing him incorrect or false returns, and he had recourse to spies and secret agents, whom he sent to various districts to make inquiries, to ascertain the real number of houses, and bring him the lists. On the taxable houses he then levied 100 ticals on every three houses, and the untaxable were those whose occupants were liable for military and other public employ. Every house was thus bound to pay, either in money or service. I should mention here, that in almost every town or village in Burmah, there are two parties of conflicting interests—the local officers for the time being, and some individuals, or the heirs or descendants of others, who had held office at some former period. The latter closely watch the proceedings of the former; and by setting one against the other, the Burmese government generally contrive to elicit the truth. These returns are therefore nearer the truth than may be at first imagined; and, at all events, they contain all the information in regard to the population of Burmah which its own government possesses. The papers connected with the census of 1783 are very voluminous, containing, as I was told, and as I observed from a few specimens which I procured, not only lists of the houses in each place, but an account of its extent, boundaries, &c. The 31st volume of the *Chronicles of the Kings of Ava* states the fact of this census having been ordered about the month of December, 1783, but gives none of its details, nor even its general result.

The census ordered by the late King of Ava was taken, it will be seen, in the year 1826, immediately after the conclusion of the war with our government. Those hostilities, no doubt, had considerable effect on

* See 16th vol. of the *Asiatic Researches*, p. 372.

† See 17th vol. of the *Asiatic Researches*, pp. 470 and 480.

the population of the country ; but, in addition to this calamity, we must bear in mind, that during the reign of King Mendaragyee, many causes served to diminish the population, or prevent its increase. His disastrous campaigns against Siam and the Zenmay Shans, and various insane projects, and generally severe rule, excited frequent insurrections, and led to whole towns and villages being deserted, and to the emigration of vast numbers of the inhabitants of Pegu and Martaban into Siam. We may account then, in some degree, for the remarkable circumstance, that the census of 1826, taken 43 years after Mendaragyee's census, should have exhibited during this long period so small an increase in the population as only 42,662 souls. We must remember also, that the late king was not so much feared by his subjects as his grandfather had been, and there must have been a very great unwillingness on the part of the provincial officers to report any increase in the number of houses in their districts, lest it should subject them to increase of assessment. Hence, as an examination of the annexed lists will show, in many districts the number of houses returned in 1826, is precisely the same as the number returned in 1783. Some districts, however, such as those of Ava, Isagain, Mouttshobo, and Wuntho, show a very large augmentation, but this was occasioned chiefly by additional villages from the *tait* or demesnes of the crown, and other districts having been transferred to them.

The number of houses only in each place is exhibited in the returns of the provincial officers, and the Burmese sometimes reckon so many as ten persons, great and small, to a house,* and sometimes, only seven.† But they did not appear to me to derive either number from any satisfactory *data*, and neither my own inquiries at Ava, nor those made by my friend Mr. C. Lane, who resided in that city several years, could ever find so many as seven residents to be the average in the houses of private individuals there. Of course the dwellings of the princes and chief officers of government usually contained many more ; but most of their servants, attendants, and guards remained in their master's houses during the day only, and retired at night to their own houses, which were situated either in the suburbs, or in one of the villages within the jurisdiction of the city. I remember frequently calling very early in the morning at the houses of some of the Burmese ministers, with whom I was on terms of the greatest intimacy, and finding two or three attendants only asleep in the room adjoining their master's bed-room, into which I was admitted at once, and allowed to turn his Excellency out of bed. In the same manner, the troops and boatmen on duty at the capital were periodically summoned from their own homes in the country, to which they returned as soon as their tour of duty expired. A careful census, which was taken by my friend, Mr. Maingay, in the year 1833, of the Anglo-Burmese provinces on the coast of Tennasserim, gave to the house of each inhabitant no more than five and a fraction, or about the same proportion, ($5\frac{1}{2}$) which Mr. W. B. Bayley ascertained to be the average rate in Burdwan.‡ Under the Burmese government, however, the monasteries are numerous, and always full of men who desire to avoid public service ; and the inhabitants run up two or three houses as one, and adopt other means for concealing their

* See Mrs. Judson's Memoirs, p. 205.

† See Crawford's Embassy to Ava, p. 317.

‡ See 12th vol. of the Asiatic Researches, p. 549.

habitations and escaping taxation. We may therefore allow as many as seven souls to each house set down in their official returns ; and I think if we add a tithe for omissions and false returns on the part of the local officers of Mendaragye, we shall obtain a tolerably correct account of the population of Burmah Proper and Pegu, as it stood in the year 1783.

I confess I possess no means of estimating the number of the wild tribes subject to Ava, which are scattered all over the country. But if we include the inhabitants of the two southernmost tributary states, Monkme and Mobyé, the chiefs of which were considered at Ava as uncivilized, and the Red *Karians*, and the Taung-thns, (which last are found along a strip of territory lying between Burmah and the Eastern Shans, and are the remains of a people that had once a separate kingdom, the capital of which was Tathoun, situated to the south-east of Pegu) ; and if we include also the Burmese and Pegu tribes of Karians, the Khyens, Kadns, Dhanns, Kwes, and the Kakhyens or Singphos, we may perhaps reckon 830,000, the number estimated by Mr. Crawford.

With respect to the Shan states or districts subject to Ava I could obtain no other account of their population than that derivable from the annexed list B, which shows the number of houses liable for public or military service in each state, as ascertained about the year 1800. Those states, it is well known, although occupying a very large extent of country, are now covered with waste and jungle and are but thinly inhabited, owing to the dissensions among themselves, as well as to the circumstance of their territory having been the object of contention and scene of warfare for many years between their two neighbours, the Burmese and Siamese. But presuming that the authority of the Burmese over the whole of these Shans was not of sufficient force to enable them to make a complete enumeration of the houses liable for public service, I estimate that the annexed list contains only one-half of the actual number of houses in each state. This will give these Shan states a population of more than one-half of that of Burmah Proper and Pegu together, and I cannot help thinking that even this amount is too large.

The lists of the houses in Ava, Amarapura, and Isagain, in 1826, were taken under the immediate surveillance of the court, and with considerable care. I should here explain, that in 1783 Amarapura was the capital, and Ava was deserted. In 1826, the latter had been rebuilt and re-established as the capital, and the fort of Amarapura was deserted, the inhabitants, consisting of the officers of the court and those connected with them, having removed with the king to the new city ; but the outer town and suburbs were still full of inhabitants. In 1837 the present monarch, Tharawadi, removed the capital again to Amarapura ; and Ava is now again being deserted and falling to ruins.

It remains to notice in what points the returns, I now present differ from, or confirm, the statements regarding the population of the Burmese Empire made by preceding writers, and I beg to annex copies of what Colonel Symes, Captains Cox and Canning, Mr. Crawford, and the Rev. Mr. Malcom have said on this subject.

Colonel Symes learnt that the number of cities, towns, and villages in the empire, exclusive of Arracan, amounted to 8,000, and Captain Cox also learnt, that when King Mendaragye ordered every city, town, and village to send one soldier for the Burman army, the number mustered at Amarapura amounted to 8,000. The annexed returns show,

that in 1783 the number of villages in Burmah Proper and Pegu, including those of Ye, Tavoy, and Mergui, was about 5,885, and of cities and district towns 188, making altogether 6,053. Perhaps 2,000 more would have been about the number of those in the Shan states. Colonel Symes upon this information, and reckoning each town and village on an average to contain 300 houses, and each house six persons, supposed the whole population of the Burmese empire to amount to 14,400,000; but 300 houses was far too large an average, and would be so even in Europe. The annexed returns show, that the average number, even after allowing a tithe for omissions, was not more than about 55; and those who have visited Burmah must have observed that the majority of the towns and villages are very small, consisting of only one line of houses along a road or the bank of a river, and that a village with 100 houses may be considered as a large one. Captain Cox saw reason to reduce Colonel Symes's average from 300 to 150 or 200; but even this was too large. Mr. Maingay's census of the population of Maulmain and Tavoy, in 1833, gave for the former province, which contains the large town of Maulmain, 40 houses, and for the latter only 25 to each town and village.

Both Colonel Symes and Captain Cox understood, that 5,000 was the number of taxable houses in Rangoon and its suburbs. The annexed returns show, that the number reported to those officers included the houses in the whole of the district of Rangoon, a very common practice with the Burmese, when asked by a stranger any question regarding the population of a place. Mr. Crawford therefore justly suspected, when told that the houses in Rangoon before the late war amounted to 3,250, that "the number was swelled by including in the list all the villages and hamlets of the neighbourhood."*

Captain Canning learnt that the number of registered houses did not exceed 400,000, and the annexed returns show it to have been about 300,000 in Burmah Proper and Pegu.

Most of Mr. Crawford's estimates of the population of the Burman empire are surprisingly correct, whether founded on the quantity of petroleum annually produced at Yenangyoung, which gave from 2,066,731 to 2,147,000 souls for Burmah Proper and Pegu,† or on the calculation made by Captain Alves of the population of Bassein during our occupation, which gave 4,416,000 inhabitants for the whole empire;‡ and the conclusion to which he finally came, of not rating the whole population at more than 4,000,000, was nearly the same as the total produced by me from the annexed returns.

The information given to that gentleman also by a person, who had actually perused the public registries, as to the number of villages within the jurisdiction of the three cities of Ava, Amarapura, and Isagain, the subdivisions of the towns being each reckoned as one, and as to the total number of houses in the same, was nearly correct. The former was stated to him to amount to 511, and the latter to 46,000;§ whereas, according to the annexed returns, the former was 532, and the latter 40,928. Mr. Crawford estimated the population of the city of Ava at 50,000 only, considering, however, even that amount as probably too large. The annexed returns show the total number of houses

* See Crawford's Embassy to Ava, p. 346.

† Ibid. p. 55.

‡ Ibid. pp. 464—466.

§ Ibid. p. 317.

in 1826 to have been 7,610, which, allowing seven souls to a house and a tithe for omissions, would give a population of 58,597 souls.

The Rev. Mr. Malcom was correctly informed by the Chief Wunggee, at Ava, that the last census, in 1826, gave a total of 300,000 houses,* but that intelligent gentleman, after allowing a fraction short of seven persons to a house, supposes so many as one-third of the houses to have escaped enumeration, which, I conceive, to be far too large a proportion, and he estimates the number of the Shans also, I think, too highly, at 3,000,000. The annexed Returns also show, that those who told him that the Government actually received taxes on 30,000 houses in the city and suburbs of Ava,† where, it is well known, the majority of the houses are not liable to taxation, must have swelled the number, by including the whole of the houses in the two cities of Ava and Amarapura, and in all the villages subordinate to them, which amounted in 1826, to 29,031.

No person who has not visited Burmah can form any idea of the great difficulty of obtaining correct statistical information in that country. Not only the jealousy of the government conceals all such information, and the fears of its officers prevent their disclosing it, but even when a person has succeeded, as he imagines, in persuading one of their officers to be more communicative, it is most probable that either his vanity will urge him to exaggerate, or his incapacity to remember figures, or a loose mode of observing or communicating facts, will unconsciously make him deceive and mislead the inquirer.

APPENDIX No. 1.

“Of the population of the Burman empire,” Symes says, “I could only form a conclusion from the information I received of the number of cities, towns, and villages in the empire : these I was assured by a person who might be supposed to know, and had no motive to deceive me, amount to 8,000, not including the recent addition of Arracan. If this be true, which I have no reason to doubt, and we suppose each town on an average to contain 300 houses, and each house six persons, the result will determine the population at 14,400,000. Few of the inhabitants live in solitary habitations, they mostly form themselves into small societies, and these dwellings thus collected compose their *ruas* or villages : if, therefore, we reckon their numbers, including Arracan, at 17,000,000, the calculation may not be widely erroneous ; I believe it rather falls short of than exceeds the truth. After all, however, it is mere conjecture, as I have no better data for my guidance than what has been related.”—Symes’s Account of his Embassy to Ava, 4to. edit., p. 314.

In another place, he observes, “the population of Rangoon is considerable ; there are 5,000 registered taxable houses in the city and suburbs ; if each house be supposed to contain six people, the estimate will amount to 30,000.”—Ibid, p. 214.

Captain Cox, in a letter to Sir John Shore, Governor-general, dated 27th November, 1797, says, “The question of population, I understood, has been often agitated at the Burman Court, and 4,000,000 stated as the population of the proper Burmha territory, and I have reason to believe it is pretty near the truth, rather more than less. One of the town clerks of Amarapoorah told my informant that there were 50,000 houses at Amarapoorah, including the suburbs and adjoining hamlets. I think this is an exaggerated account, because I know that Yanghong (Rangoon), the first place of trade in the Burman dominions, and more populous than any other for its size, contains only 5,000 taxable houses ; and Amarapoorah, in its most extended sense, does not appear to me more than four or five times as large. I have visited most parts of both cities, and think my estimate of their comparative size near the truth. Burmha houses are only of one story, and spread over a good deal of surface ; their cities, &c., are also crowded with many religious buildings, and the houses of all those employed under Government are surrounded

* Vol. I. of Malcom’s Travels in South-Eastern Asia, p. 208.

† Ibid. p. 111.

by court-yards, so that both these take up a great deal of room. As the taxes are levied on houses, a greater number of people are crowded under one roof than is usual in single-storied houses in other countries. I shall, therefore, allow seven persons to one house, and rating the houses of Amarapoorah at 25,000, it will make the population of this capital 175,000 souls, men, women, and children. The residence of a Court, however despotic, has many attractions; it therefore serves in some manner as a criterion to judge of the population of the country. But even supposing the above-stated number of houses double, it would argue but a small population in the Burmha dominions.

"A second *data* is the number of cities, towns, and villages in the Burmha dominions, conquered countries included. It is said, that His Majesty, desirous of information on this subject, some years ago ordered that every city, town, or village should send one soldier for the Burmha army, and that when they were mustered at Amarapoorah, there appeared to be 8,000 men. Supposing this statement correct, and it is more likely to be exaggerated than diminished, we must have a regard to local circumstances, before we can apply it as a *data*. In England and Wales, I think there are about 1,200 cities, towns, and villages, and the population of both countries is rated at about 7,000,000, more or less; but it must be remembered, that from the security derived from our happy Government, the face of the country is scattered over with habitations; besides the flourishing state of our commerce has crowded our cities and towns with inhabitants. The case is far different with the Burmha dominions; its immense wilds are inhabited by savage hordes, or ferocious animals hostile to the civilized inhabitants. Oppression is ever on the watch to seize the unprotected peasant, and anarchy and lawless rapine stalk at large throughout the land. The inhabitants, therefore, are compelled to unite in societies for their mutual protection.

"I have been in a great many of their towns and villages, which in general are little more than a straggling row of huts along the strand, or a double row lining a road of communication. I therefore do not think that the whole of these 8,000 cities, &c. can average more than 150 or 200 houses each. Taking the largest statement, or 200, it will make the number of houses in the Burmha dominions 1,600,000; and at seven persons to a house, 11,200,000 persons in the whole of the Burmha dominions—a very scanty population, indeed, for so extended a territory; and its very extension operates against its ever proving an adequate resource either for defence or revenue, for in truth, not one-half of this population can be said to be in a state of solid allegiance, and from the remainder a very large proportion must be deducted for females, old men, and infants.

"The proportion of women to men has been stated to me as 10 to 6, and 4 to 1, and this enormous disproportion of the sexes has been accounted for, by the incessant state of warfare in which the Burmha nation has been engaged by the restless ambition of its sovereigns, particularly those of the present dynasty."

In a subsequent letter, however, addressed by Captain Cox to Lord Mornington, Governor-general, and dated 15th September, 1798, he observes:—

"The Burmha dominions in their most extended sense, (that is, including countries subject to their influence, although not in a state of settled allegiance,) I apprehend may contain about 194,400 square miles, with a population of about 8,000,000; from this at least 3,000,000 must be deducted as either being independent or uncivilized, which leaves only 25 taxable inhabitants to a square mile. This population is lower than what I formerly stated, but I have reason to think it is still above the truth."

Captain Canning, in the narration of his mission to Ava, in the year 1809–10, dated 8th May, 1810, observes:—

"Nor does the population even in the most flourishing period of that State appear to have amounted to anything near the number generally supposed. From the most authentic accounts, I have been able to obtain, (which I have reason to believe to be tolerably correct,) the number of registered houses does not exceed 400,000 which, allowing five or even six to a house, will not give a population of above 2,000,000 or 2,400,000."

Mr. Crawford, during his embassy to Ava, in 1826, attempted to estimate the population of the country from the quantity of petroleum annually produced at Yenangyoung, and his calculations gave from 2,147,200 to 2,066,721 souls, and afterwards 3,300,000.—(See pp. 55 and 466 of the printed account of his Embassy.) In another place he observes, after estimating the area of the Burman empire at 84,000 square miles:—

"The population of the Burman empire, before the loss of Arracan, of its conquests to the north-west, and of the provinces south of the Salween river, was estimated by former European inquirers, as high as 17,000,000, as high as 19,000,000, and even as 33,000,000. The area of the country would then have been about 268,000 square miles; so that the lowest of these estimates would have given above 63 inhabitants to a square mile, the second, of above 70, and the third of 123. When it is considered that the greater part of the country is still in a state of nature, that the inhabitants are in a semi-barbarous state, possessing neither agricultural, commercial, nor manufacturing industry; that they have lived for ages in a state of war or anarchy; that they are egregiously misgoverned; and finally, that in a fertile territory and favourable climate, where there is room for a dense population, the effectual wages of labour are not low, as in fully peopled countries, but high, as in thinly inhabited ones, it is impossible to believe but that such estimates are greatly over-rated.

"We are at present in possession of a few facts which may lead us to more reasonable conjectures. The provinces south of the Salween river depopulated by oppression and consequent emigration, cannot fairly be taken as a standard for the whole empire. Arracan, computed to contain about seven inhabitants to the square mile, will probably make a nearer approach to it. Were the whole Burman territory, then, peopled only in the ratio of this province, it would contain in round numbers only 1,380,000 inhabitants. Arracan, however, was a conquered and an ill-governed province, and considerable emigrations from it had taken place into the British territory, so that I have no doubt this estimate is much under the truth. The only portion of the restored provinces of which an estimate of the area and population was made during our occupation was Bassein.* The area of this district was reckoned at 9,000 square miles, and the population according to the Burmese records, at 214,500, which would give near 24 inhabitants to the square mile. This rate, applied to the whole kingdom, would give a population of 4,416,000. About 30 years ago, a house tax was levied on the dwellings of the two great classes of the population, the Burmese and Talains. The amount was $33\frac{1}{2}$ ticals on each house, and the produce 4,000,000 of ticals. This would make the number of houses 120,000. The houses of all persons in public employment, and the monasteries, however, are not taxed, and through the malversation of the chiefs, it is reckoned that about a tenth of the produce is withheld. This last circumstance would raise the gross amount of the tax to 4,400,000, and consequently, the number of houses to 132,000. There is another element, however, to be taken into the calculation. The Burmese, for the express purpose of evading such a tax as this, often run two or even three houses into one. According to the Burmese, each house is reckoned at seven inhabitants, but if we add to these, priests and public functionaries, making at the same time some allowance for houses omitted, for the reason just mentioned, the number will probably not be over-rated at twelve, which will give a population of 1,584,000. To complete the population of the kingdom, it would be necessary to add the inhabitants of the tributary states, the Karyans, the Kyens, and other wild and unsettled races. We have, however, in this statement, the effectual strength of the population; the most civilized, and also the most numerous class of the inhabitants. The number of Karyans and Kyens in the province of Bassein, has been estimated from the Burmese records at 40,000. Were there, therefore, a similar proportion of the wild races throughout the rest of the empire, their total number would amount in round numbers to 830,000. This added to the last result would give a total population, exclusive of tributaries, of little short of 2,414,000."—(P. 463 to 465 of the printed account of Mr. Crawford's Embassy.

Mr. Crawford also states, "The Burman capital is not confined to the town of Ava, but embraces also Sagaing and Amarapoora, with the large districts attached to all three. Ava with its district extends along the river for six taings, or about 12 miles, and its depth inland is half this extent. Amarapoora is of the same size. Sagaing, with its district, extends for six taings along the river, and is of equal depth. According to this wide acceptation, the capital embraces an area of 288 miles. The number of villages contained in this space, the subdivisions of the town being each reckoned as one, was given to me as follows: for Ava, 320; for Amarapoora, 45; and for Sagaing, 146; making in all 511. The returns of the population in 1825, gave 46,000 houses or families. It is usual, however, for the *Wuns*, or heads of districts, to give in the census at considerably less than its real amount, and this deficiency is commonly estimated at a tithe, which would raise

* "Made by Captain Alves, the able and intelligent officer whom I have before quoted."

the actual number of families to 50,600. According to the Burman estimate, each family is reckoned at seven individuals, which would give a total population of 354,200.* This is at the rate of about 692 souls for each village or subdivision, and of 1,229 to the square mile; a very trifling population, when it is considered that three towns, and the best cultivated portions of the empire are included in the enumeration. These statements respecting the extent and population of the capital were furnished to me by a person who had actually perused the public registers, which are kept by one of the Atwenwuns, or privy counsellors, charged with this particular department; and the certain inference to be drawn from them is, that the total population of the whole kingdom must be very trifling, and its amount in all former accounts greatly exaggerated. All this will appear the more probable, when it is considered that the inhabitants of the capital enjoy, as will be afterwards explained, peculiar immunities in the way of taxation which must necessarily have the effect of concentrating the population here, and withdrawing it from the provinces.

“With respect to the population of the town of Ava itself, I have never heard any estimate; and probably, considering the mode in which the inhabitants of ‘the capital’ are reckoned, the Burmese have never attempted to make any. It must, however, as I conceive, be very inconsiderable. On a rough estimate, the area of the town and suburbs does not exceed two miles, and as I have already said, a considerable part of this is occupied by the palace and public buildings, a large portion is thinly inhabited, and much altogether unoccupied. We may compare it with other Indian towns, of which the area and population have been estimated. Calcutta is said to stand on an area of about 12 miles, and to contain 300,000. Were Ava as densely peopled, which I think very improbable, it would contain 50,000 inhabitants. Perhaps half this number would be much nearer the truth.”—(Mr. Crawford’s printed account of his embassy, p. 317.)

With respect to Rangoon, Mr. Crawford states:—“In August, 1826, I directed a census of the houses and population to be made; and found the former to amount to 1,570, and the latter to 8,666, excluding all strangers. This gives between five and six inhabitants to each house. During the administration of the last Burman viceroy, in a census which was made, the houses amounted to 3,250, which would give a population of near 18,000 inhabitants. On this occasion, however, I am told that the number of houses was swelled by including in the list all the villages and hamlets of the neighbourhood.”—(Mr. Crawford’s printed account of his embassy, p. 346.)

The following are the observations of the Rev. Mr. Malcom on the population of Burmah:—“Few countries have had their population so variously estimated. Old geographers stated it at 30,000,000; Symes made it 17,000,000; Cox afterwards reduced it to 8,000,000, and Balbi allows it only 3,700,000. The chief Woongyee, at Ava, informed me that the last census gave a total of 300,000 houses. Allowing a fraction short of seven persons to a house, this would make 2,000,000; presuming one-third of the houses to have escaped enumeration, we have 3,000,000. After the most careful inquiries, I am led to put down the number of the inhabitants to whom the Burman tongue is vernacular, at 3,000,000. This estimate was confirmed by many persons and numerous facts. The Shyans are probably 3,000,000 more, and with the other subsidiary tribes, bring up the population to about the estimate of Cox.”—(P. 208, Vol. i. of Malcom’s *Travels in South Eastern Asia*.)

“As to the population of the city (of Ava) I was at much pains to obtain correct information. The accounts obtained from Government officers did not differ much from each other. They said a census was recently taken, which gave 30,000 houses for the city and suburbs, without including any adjacent villages, and that 10 per cent. ought to be added for omissions. They computed seven persons to a house, and thus made the population 200,000. As the Government actually receives taxes on 30,000 houses, there does not seem room for estimating the number lower; but I am confident it must include the district. Mr. Crawford only allows 30,000. A severe fire occurred just before my arrival, which was reported by the proper officers to the king, as having destroyed 1,000 houses, besides huts and temporary residences. I examined the ground carefully, and compared it with the rest of the city, over all of which I rode repeatedly. The result of the whole induces me to estimate the population of Ava at about 100,000.”—*Ibid*, p. 110.

* “The Mywoon of Sagaing informed me, in conversation, that the number of houses or families in the town and district constituting his jurisdiction, was 16,000, and the number of villages about 150; a statement which may be considered as a corroboration of that given in the text.”

APPENDIX No. 2.

(A.)—Abstract of the Number of Houses in each District of Burmah Proper and Pegu, as returned by the Enumerations taken in the Years 1783 and 1826.

Districts.	1783.			1826.		
	Villages.	Number of Houses.			Number of Houses.	
		Liabie to Assessment.	Not Liabie to Assessment.	Total.	Liabie to Assessment.	Not Liabie to Assessment.
City of Ava, with its villages . . . . .	..	25	48	73	7,566	8,404
City of Amarapura, with its villages	124	4,447	10,964	15,411	3,996	9,065
City of Isagain, with its villages	131	1,272	5,139	6,411	3,045	8,852
Between the Capital and the North-West Frontier, to the West of the Erawadi	921	38,905	31,146	70,051	45,378	39,495
On the Western Frontier	505	14,690	5,149	19,839	15,081	5,529
Along the Erawadi to the Northward of the Capital	220	2,646	1,519	4,165	3,530	3,529
Along the Erawadi to the Southward of the Capital.	2,119	52,518	14,113	66,631	52,534	14,195
Between the Capital and the South-East Frontier, to the East of the Erawadi	1,065	30,247	15,795	46,042	23,627	20,461
Tait, or Demesnes of the Crown	523	18,431	25,077	43,508	11,383	6,665
Myen, or Cavalry Jaghires	205	4,223	3,672	7,895	3,102	1,806
Miscellaneous	59	47	1,476	1,523	25	947
Yowunzu Kyi-wun, Wun-zu, or Districts under the Royal Treasurer, &c.	50	..	14,508	14,508	..	14,508
Total	5,922	167,451	128,606	296,057	169,267	133,456
						302,723

(B.)—*Number of Houses liable for Public Service in the different Shan States and Districts subject to Ava, as taken by the Kyi-wungyee's Father, the Myen-wungyee, about the Year 1800.*

States and Districts.	Number of Houses.	States and Districts.	Number of Houses.
Kyaintoun	5,000	Brought forward . . .	53,800
Kyain Khyaing	1,000	Légyá	5,000
Main Youn	5,000	Main Kain	2,000
Thainni	30,000	Youkzouk	4,500
	41,000	Thigit	200
Mouch	3,000	Isagá	500
Maintsait	3,000	Thibo.	3,000
Mainpun	500	Main Toun	3,000
Heloun	100	Main Loun	300
Kyaintoung	2,000	Thounzay	100
Kyain Khan	200	Naung-mwon	50
Nyaung Yowe	4,000	Main Pyin	50
		Tabet	900
Carried forward	53,800	Toungbain	3,000
		Total	76,400

(C.)—*List of the Number of Houses within the Cities of Ava, Amarapura, and Isagain, and of Towns and Villages and Houses within the jurisdiction of each of those Cities, in the Year 1826.*

Districts.	Towns and Villages	Number of Houses		
		Liable to Assessment.	Free from Assessment, as belonging to persons enrolled in the Military Lists.	Total.
Ava, City of . . . . .	..	4,733	2,877	7,610
Villages first placed under the jurisdiction of Ava	83	2,293	4,032	6,325
Ditto subsequently placed under the same.	48	291	1,211	1,502
City of Panya and its villages	11	249	284	533
Total	142	7,566	8,404	15,970
Amarapura, City of . . . . .	..	3,797	7,697	11,494
Villages subordinate to Amarapura	27	199	1,368	1,567
Total	27	3,996	9,065	13,061
Isagain, City of . . . . .	..	858	3,154	4,012
Villages first placed under the jurisdiction of Isagain	37	439	1,451	1,890
Ditto subsequently placed under the same	76	1,748	3,738	5,486
Ditto of Pagoda slaves	4	..	509	509
Total	117	3,045	8,852	11,897

On the Monts de Piété of Rome, Genoa, Turin, and Paris, and other Pawnbroking Establishments on the Continent. By HENRY JOHN PORTER, Esq., F.S.S.

[Read before the Statistical Section of the British Association, 3rd August, 1841.]

THE first institution of this kind, according to the authority of Mr. Barrington, of Limerick, may be traced to a period immediately preceding the Christian era. The Emperor Augustus, early in his reign, created a fund from the confiscated property of criminals, for lending to the poor on pledges, which were double the value of the sum required; but no interest was required.

Tiberius also created a fund, and gave loans for a period of three years on landed security of double the value of the loan. Alexander Severus lent to the poor, without interest, for the purpose of purchasing land,—repayment being made by instalments from the produce of their industry. These examples in ancient times were followed in modern Italy, where similar institutions received every encouragement from the Popes of Rome. It will be unnecessary to mention the various places and dates of their successive establishment, further than to state that in the sixteenth century a great number of them were opened with the most beneficial results. A long and warm contest was carried on between the Franciscans and Dominicans, as to the merits of these institutions,—the latter opposing them as illegal and usurious, and the former ably defending them; but the matter was set at rest by Pope Leo X., in the tenth sitting of the Council of Lateran, when it was declared that lending houses were legal and useful; and this decision was subsequently confirmed by a decree of the Council of Trent. For some time there was much difficulty in establishing Monts de Piété out of Italy, as Protestants were unwilling to imitate any institution originating at the Court of Rome; but this futile objection could not long be maintained, and in 1568 one was established at Amsterdam by the magistrates, at the recommendation of William, Prince of Orange.

I shall confine myself in this paper to the account of such of these institutions as I have personally inspected, and after having successfully established several in Ireland, on the same principle, it may be imagined with what pleasure I visited the Monte di Pietà of Rome, which is the oldest pawnbroking establishment in existence. The following extract respecting the origin and early character of this institution, is taken from an old volume which I found in one of the libraries of Rome, entitled

The Pious Institutions of Rome, 1689.

“No person can entertain the least doubt, not merely of the utility but of the necessity of the institution of a Monte di Pietà in every city and large town, and especially in Rome, the universal country and asylum, whither the destitute of the whole world repair for the relief of their necessities. The original founder of this great work of benevolence in Rome was Padre Giovanni Calvo, commissary-general of the Roman Court, a Franciscan of the Order of Minorites, who obtained the sanction of Paul III. for an association of some persons of distinction, whom he had united for this object. This pontiff not only approved of the institution of the present sacred Monte di Pietà, but assisted the undertaking with money, enriched it with indulgences and privileges, and conferred

on it all the favours and endowments* which are enjoyed by other similar institutions, in whatever part of the world established. These ample grants were afterwards confirmed by several Popes, his successors.

“The sacred ‘Monte di Pietà’ has for its object the advance of sums of money, in each case not exceeding 30 crowns,† to the poor and to necessitous persons of every description, on the security of pledges.

“This is accomplished by the contribution of funds to the institution by individuals actuated by benevolent and charitable motives, or by investments from parties who are apprehensive of danger in retaining large sums in their keeping, and deposit them with the establishment for greater security. The pledges which are taken from day to day are retained for 18 months, after which time, if the owner fail to appear, or to send and redeem them, they are sold by auction publicly, and with strict fairness, to the highest bidder. The proceeds are applied towards satisfying the claims of the establishment, including interest, at the rate of two per cent. on the loan, and the surplus is carried to the account of the owner of the pledge, and is paid to him. Thus the greatest amount of accommodation and public utility is effected.

“This benevolent institution is governed by a fraternity, called by the name of the Monte di Pietà, which every year deposes 40 distinguished members for the direction of its affairs. This body meets weekly to deliberate on all that is required for the maintenance of the establishment, which may be regarded as the common patrimony of the poor and the rich, and the great mansion of all.

“Sextus V., in addition to other benefits conferred on this Association, including the purchase, with his own money, to the amount of 7,000 crowns, of a palace in the Torre Sanguigna for the deposit of pledges, invested the Company with the degree of archfraternity, and conferred the privilege of associating other companies of similar institutions, endowing them with various other privileges and indulgences. He had in view thus to excite the devotion and united labours of the faithful to the promotion of this good work.

“The costume of the association does not include the ‘besace.’‡ Its device is a Pietà, or representation of Pity, with five mountains, and its feast is kept on Tuesday of the Octaves of the Pentecost with great solemnity.

“This benevolent institution was regarded with peculiar favour by Pope Clement VIII., who, in addition to other benefactions, confirmed generally all the concessions made by former Popes, especially the application of judicial deposits originally granted by Gregory XII. The palace presented by Sextus V. being also inadequate to the continually increasing accumulation of pledges, Gregory procured the removal of the establishment to another commodious palace on the Piazza di Sanmartinello, which being purchased, together with many of the adjoining houses, was rendered fit for all the purposes of the institution, as it now exists, the splendid ornament of that sacred place and of the city.

“Different statutes were subsequently passed for the good regulation of this establishment, which may well be designated the common asylum

* The term in the original is “indulti,” these being the letters by which the Pope confers on a society, or on individual persons, the privilege of appointing to certain benefices, or of enjoying them in a mode different from the customary tenure.

† A little more than 6*l.* sterling.

‡ The “besace” is the small bag or pocket for alms, worn by the mendicant friars, and hence might be deemed appropriate for members of a charitable institution.

of the poor and of every condition of persons, whilst in dependence on this institution rest the preservation and security of nearly all the pious foundations, monasteries, hospitals, and churches, and the greater part of the families of Rome.

"These statutes were happily commenced, whilst the sacred Monte di Pietà enjoyed the protection of San Carlo Borromeo, now the Cardinal, nephew of Pius IV. They were afterwards continued by Guastavillani, now chamberlain of the holy church, and attained their maturity under the Cardinal Aldobrandini, nephew of Clement VIII. Finally they were established and promulgated by authority under Alexander VII."

Not content with this extract, I procured an introduction to the Generale, who is at the head of the Franciscans at the Arracoli in Rome, and his secretary, Pater Antonio, most kindly sought out the following notice in the records of that monastery:—

"1541. John Calvus, son of Calvus, was a native of the kingdom of Corsica, and educated in the province of Corsica. He was a man renowned for his learning, skill, and suavity of manners. He held the office of Commissario in the Court of Rome, where he was selected at the general assembly at Mantua to regulate the whole order of Franciscans. He was the first person to institute the Monte di Pietà. He was eminent for a two-fold apostolic office. He was theological advocate at the Council of Trent, esteemed by Pope Paul III. and by the Kings of France and Lusitania. He died at Trent 21st January, 1547, having held office for six years."

The following tables exhibit the operations of this institution during the year 1839:—

Sagro Monte di Pietà di Roma (established 1539.)

1839.	Number of Articles.	Amount lent.						Average Amount lent on each.
Remaining in Store } 31st Dec., 1838 . }	94,872	Scudi. 349,849	Baioc. 90	£. 75,800	s. 16	d. 3	£. s. d.	..
Pawned in 1839 . . }	306,161	925,327	10	200,487	10	9	0 13	1
Total . . . }	401,033	1,275,177	0	276,288	7	0	..	
Sent out of Store, be- ing Redeemed. . }	287,234	891,259	0	193,106	2	4	0 13	5 $\frac{1}{4}$
Remaining in Store } 31st Dec., 1839 . }	113,799	383,918	0	83,182	4	8	0 14	7 $\frac{1}{4}$
Amount of Capital in the Monte di Pietà Department . . . }		Scudi. 455,391	Baioc. 67 $\frac{1}{2}$	£. 98,668	s. 3	d. 9		
Amount in actual Circulation 31st Dec., 1839 }		383,918	0	83,182	4	8		
Balance remaining in hand .		71,473	67 $\frac{1}{2}$	15,485	19	1		

The greatest amount lent in one sum is 12,000 scudi, or 2,600*l.*, and the least sum lent to one person is 20 baiocchi, or 10 $\frac{1}{2}$ *d.* The expenses of management amounted to 28,069 scudi, or 6,081*l.* 12*s.* 4*d.*, the number of persons employed being 98; and the net profits in 1839 were 20,798 scudi, or 4,506*l.* 4*s.* 8*d.*

In the banking department, commenced in 1584, the total amount lodged in 1839 was 1,914,568 scudi, or 414,823*l.*, and the amount of drafts in the same year was 1,778,323 scudi, or 385,303*l.*, leaving a balance or increase of capital to the amount of 136,245 scudi, or 29,520*l.*

The Monte di Pietà of Rome embraces, as may be seen from the foregoing statements, two distinct departments, one for pawnbroking and the other for banking. The former is divided into Primo Monte, Secondo Monte, and Terzo Monte (first, second, and third Monte). The first and second are for the reception of goods on which the amount lent does not amount to a scudo (4*s.* 4*d.*); the third is for articles of a higher value, on which the amount lent exceeds a scudo.

To give some idea of the amount of the transactions, I may mention that the net profits of the year 1839, amounting to 20,798 scudi, or 4,506*l.* of our money, do not include the transactions of a very large class of the borrowers, as the institution lends without any interest whatever to the most necessitous persons, provided the loan does not exceed one scudo; and they are even permitted, if they please, to enter three separate pawns, and receive as much as three scudi as distinct loans, without interest; and to this class of borrowers the amount of 80,000 scudi, or 17,333*l.* 6*s.* 8*d.*, was lent in the year 1839. The expenses of management, stated at 6,081*l.* 12*s.* 4*d.*, do not include pensions, which are given to about 30 retired officers of the institution, and widows and orphans of such as have died in the service of the Monte di Pietà. Officers are obliged to lodge five per cent. of their salaries for a retired fund, and, if they have served 40 years, they have the privilege of retirement on full pay from this fund, or if they please, they may, at the expiration of 20 years, retire on half-pay. Male orphans have a certain allowance until they attain the age of 21, and the females have assistance until they are married. The profits of the institution are applied to the increase of the capital, and in this manner the Monte di Pietà of Rome is possessed of property to the amount of 1,000,000 of scudi, or nearly 217,000*l.* This is partly invested in the public funds and partly in landed property, of which the institution possesses a large extent, in the neighbourhood of Civita Vecchia.

The class of persons who make use of the Monte di Pietà of Rome, and derive so much benefit from the loans issued on goods, is not confined to the poor, who pay no interest; but a very large amount is transacted with persons in trade and business in time of distress, and even the property of crowned heads has found its way into the institution. I shall name a few of the articles which I had in my hand, with their value, and the amount lent on each:—

Description.	Value.				Amount lent.			
	Scudi.	£.	s.	d.	Scudi.	£.	s.	d.
One diamond ring which weighed 66 grains . . . }	8,000	1,733	6	8	4,500	975	0	0
A suit of pearl }	5,000	1,083	6	0	3,000	650	0	0
A snuff box of gold, with a likeness of Louis XVIII.. }	2,000	433	0	0	1,100	238	6	0
set in pearls }								
A coronation gold medal (English) }	250	54	3	4	150	32	10	0
A diamond necklace }	1,000	216	13	4	706	152	19	4
Tiara of diamonds and a pearl necklace }	2,500	541	13	4	1,500	325	0	0

Not more than one-tenth of this valuable description of property is ever sold, nine-tenths being the average of the releases from the Terzo Monte, the pawns in which exceed 800,000.

The government of the Monte di Pietà of Rome is vested in a protector, who is the treasurer of Rome for the time being. This office was filled at the period of my visit by Cardinal Tosti. The resident director-general was Cavaliere Giovanni Pietro Campana, through whose kindness I was introduced to the secretary, Giuseppe Azzuri, and to this intelligent individual I feel deeply indebted for the anxiety he manifested to gratify my curiosity, and the patience with which he accompanied me in my frequent visits to the institution. His inquiries as to the progress of such establishments in Great Britain evinced a clear and most benevolent mind, and he has already made considerable proficiency in the English language, with a view to be better acquainted with the various charitable institutions for which England is so remarkable.

Monte di Pietà di Livorno (Leghorn).

The following is an account of the transactions of the Leghorn Mont de Piété in the year 1839.

1839.	Number of Articles.	Amount.		
Pawned	225,938	Tuscan lire. 2,099,726	£. 68,897	s. d. 5 2
Redeemed	135,571	1,100,250	36,101	19 1
Sold	13,201	86,764	2,846	18 11
Capital—Deposits, at 4 per Cent. . . .		490,367	16,090	3 3
Deposits, without Interest, and drawn at pleasure		460,168	15,105	15 10
Interest not yet claimed		6,696	219	14 3
Profits in one Year		50,968	1,672	7 9
Expenditure—Salaries		27,074	888	7 4
Auditors or Inspection of Books		560	18	7 6
Pensions		4,766	156	7 8
Interest at 4 per Cent.		22,151	726	16 7
Interest at 5 per Cent. to Officers		9,976	327	6 9
Total		64,527	2,117	5 10
Interest received		63,074	2,069	12 4
Ditto at Montini		8,388	275	4 8

Out of the profits there were contributed }
to the Hospital for Cholera Orphans . } lire 1,500, or £49 4s. 5d.; and
to the Poor House } lire 10,000, or £328 2s. 6d.

The Leghorn Mont de Piété receives from every Tuscan vessel a certain tax, instituted by Government for its support; also all persons acting as sureties for public offices are obliged to lodge the amount of their bond in the Mont de Piété fund.

Monte di Pietà di Torino (Turin).

At Turin I received much attention from the secretary during my short visit. The following tables I was permitted to compile from the books of the institution :—

1840.	Number of Articles.	Amount.		
		Francs.	£.	s. d.
Pawned	213,918	2,654,570	106,182	16 0
Redeemed	119,145	1,341,321	53,652	16 9
Capital employed . .	. .	1,284,955	51,398	4 0
		Francs. Cents.	£.	s. d.
Received for Tickets		34,113 55	1,364	10 9
Received for Interest		54,725 70	2,189	0 6
Interest paid		60,000 0	2,400	0 0

1839.	Number of Articles Pawned.	Amount received for Tickets Redeemed.			Amount charged for Tickets.	
		Francs.	£.	s. d.		Sous.
Under 3 fr. . .	79,325	3,966	158	12 9	Under 3 fr. . .	1
From 3 to 10 fr.	70,774	10,616	424	12 9	From 3 to 10 fr	3
„ 10 „ 20 „	24,178	6,044	241	13 2	„ 10 „ 20 „	5
„ 20 „ 50 „	16,443	5,755	230	4 0	„ 20 „ 50 „	7
„ 50 „ 100 „	5,942	2,971	118	16 9	„ 50 „ 100 „	10
Above 100 fr. . .	3,389	3,389	135	11 2	Above 100 fr. .	20

The above statement of the Monte di Pietà at Turin shows that the interest received is small, the charge being only five per cent., while for a portion of the capital four per cent. is paid. This low rate of interest is, however, counteracted by a charge for tickets, on the plan of the English and Irish pawnbrokers, a plan which we may hope, ere long, to see abolished. The average daily number of pawns is 689.

When goods are sold, five per cent. is retained, and the balance is paid to their owner if they are claimed within 12 months.

The least sum lent is 30 sous, or 15*d.* British. Three-fourths of the value is lent on gold and silver; two-thirds, or a half, on clothes. Money is lent on Monday mornings without any interest, as it is the poorest class who frequent it on that day.

The whole profits are handed over to the directors of St. Paul's charity at Turin, which assists various hospitals, &c., from its funds.

Monte di Pietà di Genova (Genoa).

In passing through Genoa I was not able to remain more than a few hours, therefore my visit to the Monte di Pietà was rather hurried, and the following table is all that I was able to extract of a statistical nature :—

From 1st Jan., 1840, to 19th Nov., 1840.	Number of Articles	Amount.			
		Frances.	�.	s.	d.
Pawned	90,020	1,441,781	57,671	4	9
Pawned in one day, 19th Nov.. .	360	9,183	367	6	5
Amount of Pawns in Store at that date }	58,335	1,025,874	41,034	19	2

One of the rules of this institution is that no person is allowed to pawn, unless the individual is known, or his residence ascertained, or unless he is accompanied by a surety who is known ; nor are minors permitted to pledge articles unless they are accompanied by their parents or tutors.

Articles of gold or silver, or other valuable articles which do not deteriorate in value, are retained twelve months ; linens and other soft goods are not kept beyond six months, but they may be renewed and revalued. The interest charged on loans is ten per cent.

Mont de Pi  t   d'Aix.

At Aix, in the south of France, I visited the Mont de Pi  t  , but was unfortunate in not meeting the secretary of the institution. He, however, called on me and supplied the information, from which I compiled the following table, showing that the extent of business is not considerable. The most valuable articles are either renewed or sold by auction, and those of lesser value are generally redeemed.

The average amount lent on each article is much higher than in other towns on the continent, being nearly double the average of loans in the Paris Mont de Pi  t   :—

1838.	Number of Articles.	Amount.			Average Amount.
		Frances.	�.	s. d.	�. s. d.
Pawned	4,168	109,335	4,373	8 0	1 0 10
Released	2,527	63,377	2,535	1 7	1 0 0
Renewed	1,003	38,780	1,551	4 0	1 10 10
Sold by Auction . . .	244	8,485	339	8 0	1 8 0
Remaining in Store 31st Dec., 1837 }	3,125	94,809	3,792	7 2	. .
Add Pawned 1838 . .	4,168	109,335	4,373	8 0	. .
Total	7,293	204,144	8,165	15 2	. .
Deduct taken out of Store 1838 }	3,774	110,643	4,425	14 5	. .
Remaining in Store 31st Dec., 1838. . . . }	3,519	93,501	3,740	0 9	. .

Mont de Piété de Paris.

Tables explaining the Operations for the Year 1840.

Pledging Department.	Number of Articles.	Amount lent.			Average Amount lent on each.
		Francs.	£.	s. d.	£. s. d.
Pawned . . .	1,220,692	18,576,020	743,040	16 8	0 12 2
Renewed . . .	241,130	5,763,827	230,553	1 8	0 10 9 ³ / ₄
Total . .	1,461,822	24,339,827	973,593	18 4	. .

Releasing Department.	Number of Articles.	Amount received.			Average Amount received on each Pawn.
		Francs.	£.	s. d.	£. s. d.
Redeemed . . .	1,090,119	16,362,143	654,485	15 0	0 12 0
Renewed . . .	241,130	5,763,827	230,553	1 8	0 10 9 ³ / ₄
Sold by Auction .	93,178	1,641,575	65,663	0 0	0 13 4 ¹ / ₄
Total . .	1,429,427	23,767,545	950,701	16 8	. .

State of the Magazine or Stores of Pawned Goods 31st December, 1840.

	Number of Articles.	Value.		
		Francs.	£.	s. d.
Remaining in Store on 31st Dec., 1839}	800,347	15,311,359	612,456	7 6
Pawned in 1840}	1,461,822	24,339,847	973,593	18 4
Total	2,262,169	39,651,206	1,586,050	5 10
Sent out of Store, redeemed, renewed, or sold}	1,429,427	23,767,545	850,701	16 8
Remaining in Store 31st Dec., 1840}	832,742	15,883,661	735,348	9 2

Connected with the Paris Mont de Piété, there are four dépôts in different quarters of the city for receiving pledges, and those articles are deposited once a-week in the principal “Magasins” in the Rue de Blanc Manteau.

These smaller dépôts are managed by agents (commissionaires) who have a certain profit on the transaction. This is reasonable, as persons at remote parts of the city are saved much time and trouble, and they have the option of going to head quarters if they please, and of thus saving the commission.

The following table will show the proportion of the transactions by the public at the principal magasins, and by the commissionaires, in 1839 :—

	By the Public.		By Commission.		Total.		Total in British Currency.		
	Articles.	Amount.	Articles.	Amount.	Articles.	Amount.			
		Francs.		Francs.		Francs.	£.	s.	d.
Pawned .	104,627	4,140,924	1,070,700	14,113,742	1,175,327	18,254,666	730,186	12	9
Renewed .	89,656	2,751,365	135,351	2,605,237	225,007	5,356,602	214,264	1	8
Total. .	194,283	6,892,289	1,206,051	16,718,979	1,400,334	23,611,268	944,450	14	5
Released .	539,196	11,237,619	718,778	9,813,445	1,257,974	21,051,064	842,042	11	2

This statement will explain the advantage and accommodation which these depôts afford in a large city like Paris. The proportions of the transactions are as follows :—

In every 100 pawns, 9 are by the public, 91 by commission.

„ 100 renewals, 40 are by the public, 60 by commission.

„ 100 releases, 44 are by the public, 56 by commission.

From this statement, it appears that the first transaction is usually carried on at the branch establishments, which seems to indicate that the central depôt is not situated in a quarter much frequented by the parties who usually have recourse to pawning, and that the improvidence or necessity which urges them to that course prompts them to act with precipitation, and to obtain the desired sum at the nearest depôt, without considering the economy of applying to the central depôt; while, on the other hand, a large proportion of the renewals and releases, which must be made by the same individuals or by persons of the same class, are made at the central depôt, the motives for precipitation being removed, and a spirit of thrift being caused by the possession of the means of repayment. The poor, who will be often prodigal to the last degree in the wasteful expenditure of a week's wages, generally haggle for a half-penny in the purchase of an article necessary to the comfort or respectability of themselves or their family. This spirit is exemplified, but in a more satisfactory manner, in the above statement. The daily transactions in 1839 were as follows :—

	By the Public.		By Commission.		Total in British Currency.		
	Articles.	Amount.	Articles.	Amount.			
		Francs.		Francs.	£.	s.	d.
Pledges . .	341	13,532	3,499	46,123	2,386	4	0
Renewals . .	293	8,991	442	8,514	700	4	0
Releases . .	1,232	23,250	1,598	19,748	1,719	18	4
Total . .	1,866	45,773	5,539	74,385	4,806	6	4

On Mondays and Tuesdays there is rather more business done in the pawning department than on other days. On Wednesdays, Thursdays, and Fridays there is little variation; but on Saturday and Sunday mornings the releases are generally double those of any other day. This corroborates what has been frequently stated that a great number of poor persons pawn their Sunday clothing in the early part of the week, and take them out on Saturday; and that it is done for weeks in succession there can be little doubt. What a strong ground this is for the *Mont de Piété*

system in Great Britain, which would relieve the poor from the oppressive charge for duplicates or tickets!

Here I shall, I trust, be excused for repeating a statement which I made at Glasgow last year. I ascertained that the paupers' pence charged by the pawnbrokers in the county of Armagh for tickets, within twelve months, exceeded the whole of the grants to dispensaries by the sum of 132*l.* 17*s.* 6*d.* :—

	£.	s.	d.
Paupers' pence being.	926	0	0
County grants to dispensaries	793	2	6
	<hr/>		
	£132	17	6

and the estimated profits of pawnbrokers within the same county, after paying the cost of printing tickets, and deducting six per cent. for interest on their capital, exceed the whole of the grand jury presentments for charitable purposes by the sum of 260*l.* 10*s.* 4*d.*—

	£.	s.	d.
The estimated profits being	2,646	14	2
	<hr/>		
	£.	s.	d.
Grand Jury presentments to 15 dispensaries	793	2	6
County Infirmary	593	3	1
District Lunatic Asylum	999	18	3
	<hr/>		
	2,386	3	10
	<hr/>		
	£260	10	4
	<hr/>		

The interest charged by the Mont de Piété of Paris is nine per cent., and half per cent. to the valuator at the time of releasing.

The number of watches in the magazine is generally from 250,000 to 300,000, and when I last visited the place there were 6,000 mattresses in store, at which time they had refused to receive any more of this article. In 1839, 195,541 francs, or 7,821*l.* 13*s.* 4*d.* were given to the support of the hospitals.

I am unable to give any information concerning the Mont de Piété at Naples, not having met any of the directors when I visited the institution; and the clerks whom I saw there were unwilling to afford me any account of their operations, in the absence of their superior officers. At Lyons I received much attention from the secretary, who promised to forward the annual report when published; but I regret to say that it has not yet reached me.

In conclusion, I beg to state, that the more I see of these benevolent institutions the more I am convinced of their being applicable to Great Britain; and that should they be generally introduced into this country, the evils of pawnbroking will be greatly diminished, and the poor materially benefited.

PROCEEDINGS OF THE STATISTICAL SOCIETY OF LONDON.

First Ordinary Meeting, 1841-42, Monday, 15th November, 1841.

Lieut.-Colonel SYKES, V. P. in the Chair.

The following gentlemen were proposed as candidates for admission :—

Thomas Gill, Esq. M.P.
 Richard Beamish, Esq. F.R.S.
 Henry Woolcombe, Esq.
 Lieut.-Colonel P. W. Pedler.
 Charles West, Esq. M.D
 Rev. Richard Luney, M.A.
 Thomas P. Ward, Esq.
 Rev. Thomas Blyth, D.D.

The following gentlemen were elected :—

G. A. Walker, Esq.
 Samuel Hitch, Esq. M.D.
 H. P. Davies, Esq.

A statement was made relative to the Population of the Burman Empire. (*see* p. 335.)

A paper by Dr. Alison, "On the Practical Operation of the Scotch System of Management of the Poor," was read. (*see* p. 288.)

Second Ordinary Meeting, Monday, December 20th, 1841.

THOMAS TOOKE, Esq. V. P. in the Chair.

The following gentlemen were proposed as candidates for admission :—

George Kerr, Esq. R. N.
 John Benjamin Heath.
 John Lewis Merivale.
 Butler Williams, Esq.
 J. Fosbroke, Esq.
 J. G. P. Neison, Esq.

The following gentlemen were elected :—

Thomas Gill, Esq. M.P.
 Richard Beamish, Esq., F.R.S.
 Henry Woolcombe, Esq.
 Lieut.-Colonel P. W. Pedler.
 Charles West, Esq., M.D.
 Rev. Richard Luney, M.A.
 Thomas P. Ward, Esq.
 Rev. Thomas Blyth, D.D.

A letter was read from W. Watson, Esq., Sheriff Substitute of Aberdeen, announcing that it is in contemplation to establish a Statistical Society at Aberdeen, and that a preliminary meeting has been held for that purpose.

A paper was read, entitled, "An Examination of the Facts obtained at the recent Enumeration of the Inhabitants of Great Britain, so far as the results have been published." By G. R. Porter, Esq. (*see* p. 277.)

MISCELLANEOUS.

Trade with the United States.—The following was the Declared Value of British and Irish Produce and Manufactures Exported to the United States in each year, from 1831 to 1840: in 1831, £9,000,000; 1832, £5,400,000; 1833, £7,500,000; 1834, £6,800,000; 1835, £10,500,000; 1836, £12,400,000; 1837, £4,600,000; 1838, £7,500,000; 1839, £8,800,000; and in 1840, £5,200,000.

Occupation of Algeria.—The expense to France of occupying Algeria, amounted from 1831 to 1839 inclusive, (the expense for 1830 having been defrayed out of the treasures of the Dey, which fell into the hands of the captors) to £13,728,856; and the receipts during the same period amounted to £663,803. The number of Deaths in the Army of Africa during the same period was, in hospital 22,495, and in the field, 1,412.

Precious Metals in Russia.—The Produce of gold from Mines in Russia, from 1823 to 1838, was 2,703,928 oz. troy, = at £3. 17s. 10½d. per oz. to £10,528,418; of platina, 661,034 oz. troy, = at the same rate to £2,583,900; and of silver, 9,453,117 oz. = at 5s. per oz. to £2,363,279.

Average Prices of Corn per Imperial Quarter in England and Wales, with the Rate of Duty on Foreign Wheat, during each week from 1st October to 24th December, 1841; also the Average of each Month during that period, and of the Quarters ended Michaelmas, 1841.—(continued from page 273.)

Date.	Wheat.						Weekly Average.									
	Weekly Average.		Aggregate Average.		Duty on Foreign.		Barley.		Oats.		Rye.		Beans.		Peas.	
Weeks ended	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Oct. 1 .	61	9	68	6	16	8	33	0	22	0	38	7	42	11	38	2
8 .	61	6	66	1	20	8	31	10	21	7	35	10	40	5	38	1
15 .	62	3	64	1	22	8	31	6	21	8	38	3	38	6	38	6
22 .	63	6	62	10	24	8	31	5	21	9	35	0	37	11	39	7
29 .	64	5	62	9	24	8	31	7	22	0	39	0	40	4	38	8
Nov. 5 .	65	5	63	2	23	8	32	8	22	0	38	7	40	4	40	8
12 .	66	4	63	11	23	8	33	4	22	8	40	2	40	11	41	3
19 .	65	11	64	8	22	8	33	4	22	6	40	2	40	4	40	3
26 .	64	9	65	1	21	8	32	4	22	6	44	7	41	2	40	9
Dec. 3 .	63	6	65	1	21	8	31	9	22	2	44	5	39	4	39	7
10 .	62	7	64	9	22	8	30	9	22	2	44	8	39	0	39	4
17 .	62	9	64	4	22	8	30	5	21	5	39	5	37	9	39	0
24 .	62	10	63	9	23	8	30	2	21	1	44	8	37	0	36	6
Months:—																
October .	62	8	64	10	. .		31	10	21	9	37	4	40	0	38	7
November .	65	7	64	2	. .		32	11	22	5	40	10	40	8	40	8
Quarter:—																
Michaelmas	68	3	. .		. .		35	9	23	2	37	1	42	1	44	2

An Account of the Quantities of Foreign and Colonial Wheat and Wheat-Flour Imported, Paid Duty, and Remaining in Warehouse, in each of the Months ended 10th October, 5th November, and 5th December, 1841.— (Continued from p. 274.)

Months ended	WHEAT.			WHEAT-FLOUR.		
	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.
	Qrs.	Qrs.	Qrs.	Cwts.	Cwts.	Cwts.
10th Oct. .	1,088,392	2,014,030	6,694	267,217	613,643	19,586
5th Nov. .	21,388	11,139	13,884	44,437	28,920	35,030
5th Dec. .	58,258	934	73,919	58,948	5,282	85,382

Quarterly Average of the Weekly Liabilities and Assets of the Bank of England, in the Quarters ended 12th October, 9th November, and 7th December, 1841, and in the corresponding Quarters of the preceding Year.— (Continued from p. 274.)*

Quarters ended	LIABILITIES.			ASSETS.		
	Circulation.	Deposits.	Total.	Securities.	Bullion.	Total.
1840.	£.	£.	£.	£.	£.	£.
13th Oct. ...	17,231,000	6,762,000	23,993,000	22,782,000	4,145,000	26,927,000
10th Nov. ...	16,798,000	6,396,000	23,194,000	22,319,000	3,729,000	26,048,000
8th Dec. ..	16,446,000	6,337,000	22,783,000	22,078,000	3,511,000	25,589,000
1841.						
12th Oct. ...	17,592,000	7,529,000	25,121,000	23,428,000	4,713,000	28,141,000
9th Nov. ...	17,272,000	7,385,000	24,657,000	23,127,000	4,491,000	27,618,000
7th Dec. ..	16,972,000	7,369,000	24,341,000	22,768,000	4,486,000	27,254,000

Aggregate Amount of Notes circulated in the United Kingdom, distinguishing those of Private and Joint-Stock Banks, with the Amount of Bullion in the Bank of England, during the Four Weeks preceding the 21st August, 18th September, 16th October, and 13th November, 1841.

Description of Notes.	During Four Weeks preceding			
	21st Aug.	18th Sept.	16th Oct.	13th Nov.
	£.	£.	£.	£.
England—Bank of England .	17,928,000	17,069,000	17,340,000	17,065,000
Private Banks. .	5,844,300	5,768,136	6,253,964	6,288,723
Joint Stock Banks.	3,215,253	3,311,941	3,519,384	3,421,135
Scotland—Private and Joint Stock Banks. .}	3,074,393	3,092,549	3,203,703	3,383,036
Ireland—Bank of Ireland. .	2,950,875	2,877,925	3,060,750	3,333,375
Private and Joint Stock Banks . .}	1,868,361	1,929,906	2,185,398	2,611,314
Total . .	34,881,182	34,049,457	35,563,199	36,102,583
Bullion in the Bank of England	4,801,000	4,803,000	4,290,000	4,218,000

An Abstract of the Net Produce of the Revenue of Great Britain, in each of the Years and Quarters ended 10th October, 1840 and 1841.

Description.	Years ended 10th October			
	1840	1841	Increase.	Decrease.
	£.	£.	£.	£.
Customs	20,152,739	19,485,217	..	667,522
Excise	11,985,467	12,858,014	872,547	..
Stamps	6,726,317	6,687,575	..	38,742
Taxes	3,744,372	4,359,672	615,300	..
Post-Office	694,000	426,000	..	268,000
Crown Lands	167,500	153,000	..	14,500
Miscellaneous	84,479	95,123	10,644	..
Imprest and other Monies	454,784	360,487	..	94,297
Repayments of Advances.	656,140	488,858	..	167,282
Total Income	44,665,798	44,913,946	1,498,491	1,250,343

Description.	Quarters ended 10th October			
	1840	1841	Increase.	Decrease.
	£.	£.	£.	£.
Customs	5,662,877	5,737,217	74,340	..
Excise	3,916,249	4,160,866	244,617	..
Stamps	1,751,417	1,732,704	..	18,713
Taxes	332,807	320,160	..	12,647
Post-Office	123,000	116,000	..	7,000
Crown Lands	45,000	50,500	5,500	..
Miscellaneous.	24,382	15,325	..	9,057
Imprest and other Monies	82,999	97,805	14,806	..
Repayments of Advances.	172,499	122,374	..	50,125
Total Income	12,111,230	12,352,951	339,263	97,542

Total Increase on the Year, £248,148: Total Increase on the Quarter, £241,721.

An Abstract of the Income and Charges of the Consolidated Fund, in each of the Quarters ended 10th October, 1840 and 1841.

INCOME.			CHARGE.		
Description.	Quarters ended 10th October		Description.	Quarters ended 10th October	
	1840	1841		1840	1841
	£.	£.		£.	£.
Customs	4,562,048	4,256,828	Permanent Debt . . .	3,404,448	3,399,173
Excise	3,935,987	4,183,564	Terminable Annuities .	1,377,177	1,372,986
Stamps	1,761,417	1,732,704	Interest on Exchequer	31,657	38,144
Taxes	332,807	320,160	Bills		
Post-Office	123,000	116,000	Sinking Fund . . . . .	..	..
Crown Lands	45,000	50,500	Civil List.	97,024	97,382
Miscellaneous	24,382	15,325	Other Charges	354,652	409,166
Imprest and other Monies	82,999	77,805	Charge for Advances . .	70,000	60,000
Repayments of Advances	172,999	122,374	Total Charge	5,334,958	5,376,851
Deficiency Bills	150,000	150,000	The Surplus	5,845,181	5,648,409
Total	11,180,139	11,025,260	Total	11,180,139	11,025,260

An Analysis of Bankruptcies in England and Wales, shewing the Counties and Trades in which the same occurred, during the Months of October and November, 1841.—(Continued from p. 276.)

COUNTIES.	October.	November.	TRADES.	October.	November.
Bedford . . .	1	..			
Berks . . .	1	1			
Bucks . . .	..	1			
Cambridge . . .	1	..	<i>Persons connected with</i>		
Chester . . .	2	5	<i>Manufactures.</i>		
Cornwall . . .	..	..	
Cumberland . . .	1	..	Cotton Trade	4	7
Derby . . .	3	2	Woollen do.	3	3
Devon . . .	3	..	Silk do. . . . .	..	2
Dorset . . .	1	1	Linen do.	2	..
Durham . . .	1	3	Iron Foundry . . . . .	..	1
Essex . . .	..	..	Metal Wares	1	4
Gloucester . . .	3	5	Building Trades	2	6
Hants . . .	2	3	Miscellaneous	6	13
Hereford . . .	..	..	
Hertford . . .	..	1			
Huntingdon . . .	..	..	
Kent . . .	2	5	<i>Agriculture.</i>		
Lancaster . . .	11	30			
Leicester . . .	1	3	Farmers . . . . .	..	..
Lincoln . . .	1	4	Corn, Hay, and Hop		
Middlesex . . .	19	49	Dealers, Millers . . . . .	..	2
Monmouth . . .	1	..	Cattle and Wool Dealers.	2	1
Norfolk . . .	1	..	Coaches and Horses. . .	1	2
Northampton . . .	..	..	Brewers, Maltsters, and		
Northumberland . . .	..	1	Distillers	3	4
Nottingham . . .	2	1			
Oxford . . .	..	..	
Rutland . . .	..	..	<i>Other.</i>		
Salop . . .	..	3			
Somerset . . .	..	4			
Stafford . . .	..	2	Innkeepers, Victualiers,		
Suffolk . . .	4	2	Wine and Spirit Mer-		
Surrey . . .	2	6	chants	9	17
Sussex . . .	..	..	Merchants, Bankers, Ware-		
Warwick . . .	5	5	housemen, Agents, Bro-		
Westmoreland . . .	..	..	kers, Shipowners, and		
Wilts . . .	1	..	Wholesale Dealers . . .	20	28
Worcester . . .	3	3	Tradesmen, Shopkeepers,		
York . . .	7	16	and Retail Dealers . . .	23	63
Wales	6	Miscellaneous	3	9
Total in 1841 . . .	79	162	Total in 1841 . . .	79	62
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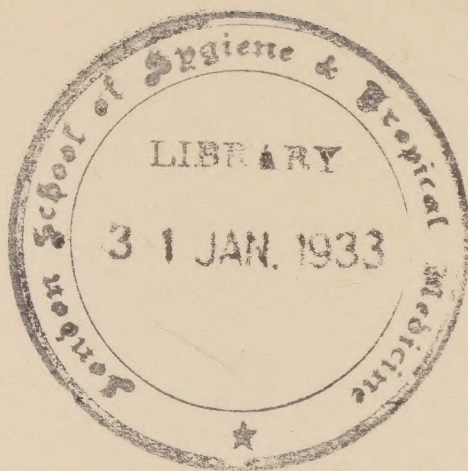
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